A Catalogue of Underwater Calls Produced by Killer Whales (*Orcinus orca*) in British Columbia

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A CATALOGUE OF UNDERWATER CALLS PRODUCED BY KILLER WHALES (*Orcinus orca*) IN BRITISH COLUMBIA

by

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ABSTRACT

Ford, J. K. B. 1987. A catalogue of underwater calls produced by killer whales (Orcinus orca) in British Columbia. Can. Data Rep. Fish. Aquat. Sci. 633: 165 p.

Underwater calls of killer whale pods recorded along the coast of British Columbia during 1978-83 are illustrated and described quantitatively. Representative spectrograms and descriptive statistics of physical parameters of 77 discrete call types and 37 subtypes are included in the catalogue. In addition, results of statistical comparisons between pod-specific renditions of shared calls are tabulated. These data form the basis for analyses of vocal differentiation and population structure of killer whales in British Columbia.

RESUME

Ford, J. K. B. 1987. A catalogue of underwater calls produced by killer whales (Orcinus orca) in British Columbia. Can. Data Rep. Fish. Aquat. Sci. 633: 165 p.

L'auteur décrit quantitativement et illustre les appels sous-marins de troupeaux d'épaulards enregistrés de 1978 à 1983 le long de la côte de la Colombie-Britannique. Sont inclus dans ce répertoire des spectrogrammes représentatifs et des statistiques descriptives des paramètres physiques de 77 types d'appels individuels et de 37 sous-types. De plus, les résultats de comparaisons statistiques entre la vocalisation d'appels communs propres à un troupeau sont présentés sous forme de tableaux. Ces données forment la base des analyses de la différenciation vocale et de la structure démographique des épaulards de la Colombie-Britannique.

PREFACE

This catalogue results from a six-year study of the underwater acoustic behaviour of killer whales in the coastal waters of British Columbia (Ford 1984). This study documented the existence of repertoires of discretely-structured vocalizations that are specific to kin groups (or pods) of killer whales. Significant group-specific variation exists among the repertoires of different pods, forming complex systems of dialects within the population.

The data in this catalogue form the basis for interpretations of the acoustic relationships of killer whale pods described in Ford (in prep.a; in prep.b). Comparisons of dialect similarity have revealed a population structure that was previously unsuspected. The dialects of killer whales appear to be highly stable over time, and historical recordings indicate that many of the calls presented in this catalogue were used by local pods over 25 years ago. In all likelihood, these calls will continue to be heard in the coastal waterways of British Columbia for decades to come. It is my hope that this catalogue will be useful to others interested in studying the communication, behaviour and social organization of killer whales, both in British Columbia and in other areas.

Data in this report may be cited without my prior written consent.

INTRODUCTION

Killer whales (Orcinus orca) in British Columbia have been the subject of considerable public and scientific interest for the last two decades. A long-term field study initiated by M. Bigg (Pacific Biological Station) in 1973 (Bigg et al. 1976; Bigg 1982), and similar research by others (Balcomb et al. 1980, 1982) has provided much information on the distribution, abundance and social organization of this population. These studies have been based on a photographic technique for identifying individual whales from natural markings. Killer whales were found to live in long-term social groupings of related individuals known as "pods", which travel in three separate associations, or "communities", along the British Columbia coast.

During 1978-83, I conducted a field study of the underwater vocalizations and behaviour of killer whales in British Columbia (Ford and Fisher 1982, 1983; Ford 1984). Acoustic exchanges among killer whales were found to be dominated by repetitious, pulsed calls that could be organized into discrete categories. Repeated encounters with photographically-identified resident pods demonstrated that each pod produces a limited repertoire of discrete call types (mean = 10.7 calls/pod, range = 7-17, n = 16 pods). Recordings of captive animals of known pod origin and historical field recordings indicated that pod repertoires may remain stable for periods of at least 18 years (1965-83) and possibly 25 years (1958-83). Calls appear to be shared by most or all pod members, and few correlations between specific calls and behaviours could be identified.

There are consistent and often striking differences in the call repertoires of different pods. Certain pods share calls, yet have no calls in common other pods in the area. Pods that are acoustically related are referred to as a "clan", since it is probable that their shared vocal tradition reflects a common ancestry (Ford 1984). Calls shared within a clan often have consistent structural differences unique to single pods or sets of pods. These variations, as well as calls produced exclusively by some pods, form a system of "dialects" within each clan. Analyses of dialect similarity have revealed patterns of relationship among pods that are in many cases unrelated to observed social associations. Vocal variations such as those described in this study appear to be unique to the killer whale.

This catalogue contains representative sound spectrograms and quantitative descriptions of all discrete call types identified in the course of this acoustic study. In addition, results of statistical comparisons of frequency and duration parameters for variants of many calls are presented. These data are used in analyses of the acoustic behaviour (Ford, in prep.a)

and dialects (Ford, in prep.b, in prep.c) of killer whales in British Columbia.

STUDY ANIMALS

The abundance, distribution and life history of killer whales found along the coasts of British Columbia and Washington State have been studied intensively since 1973 (Bigg et al. 1976; Balcomb et al. 1980, 1982; Bigg 1982). These studies were based on observations of individual whales identified photographically by unique natural markings on the dorsal fin or lightly-pigmented dorsal "saddle". The following summary of killer whale distribution and social organization is based largely on information gathered by M. Bigg (Bigg 1982; pers. comm. 1986), and on data collected during this investigation.

The primary social unit of killer whales in British Columbia is the pod, a stable association of mixed ages and sexes. Pods are made up of one or more maternal groups, each containing a breeding female and her offspring. These maternal associations usually travel as distinct subgroups when the pod is dispersed. It is likely that different breeding females in a pod are related. There is considerable evidence that young animals remain with their mothers and the pod well into maturity. No permanent dispersal from or exchange between pods has been observed in 13 years of study, although subgroups may spend considerable time apart from the rest of the group.

A total of 45 pods occurs off British Columbia. These pods are of two types, "resident" and "transient", which differ in travel patterns, pod size, behaviour and feeding habits. Resident pods are commonly seen in predictable locations during the summer. Some have been sighted in these same locations at other times, but winter distribution is largely unknown. Transient pods have unpredictable movements at any time of the year and are seen relatively infrequently. Resident pods typically have five or more members (mean = 12.2, n = 19), while transient pods usually contain five or less (mean = 2.5, n = 26). Resident pods travel only with other residents and transient pods with other transients. The two types of whales do not mix when in the same area.

While foraging, members of resident pods tend to disperse widely and move rather predictably at constant speeds (see Ford in prep.a). Transient pods, in contrast, remain together and usually meander along the shoreline. The main diet of resident whales during the summer is fish, while transients seem to prey selectively on marine mammals.

The resident pods are divided into separate "northern" and "southern" communities with different distributions, as shown in Figure 1. Pods from one community are rarely sighted within the

range of the other. No pods appear to have an exclusive home range, and pods frequently associate with others within their community. No mixing occurs between the two communities.

Tables 1 and 2 show the size and composition of resident and transient pods, respectively. The alphanumeric designations of Bigg (1982 and pers. comm.) are used here to name pods. These pod names were assigned arbitrarily and do not imply degree of association or relationship. During the present study (1978-83), the northern resident community contained 13 pods with 154 whales, the southern resident community contained 3 pods with 78 whales, and the transient community contained 25 pods with 66 whales (1983 census). Recent analyses of social associations have led to a re-evaluation of pod definition (M. Bigg, pers. comm. 1986). In the northern resident community, three maternal groups of these original pods have been designated as separate pods, as shown in Table 1. In the analyses presented in this catalogue, I use the original pod designations as they existed in 1983.

METHODS

1. Field Recordings

Between July, 1978, and October, 1983, I studied killer whales at a variety of locations in the waters to the east and south of Vancouver Island, British Columbia. Resident whales were encountered on 154 days during this period, mostly from June to September. All resident pods known to occur in the area were encountered and recorded acoustically. A total of 426 "pod encounters" was made with residents (one pod encounter is the interception and identification of one pod on one day), for an average of 2.76 pods per observation day (range = 1-10). A total of 15 transient pods was encountered on 20 occasions. In addition, I examined 43 recordings of captive and wild killer whales made by other individuals, mostly prior to the onset of this study. Dates and pod identifications for both recent encounters and historical field recordings (and the sources for the latter) are tabulated in Ford (1984).

All field work was carried out from a 5-m, outboard-powered boat. Identification of the pods present was determined from photographs or visually. About 7500 photographs were taken to identify individual whales. Equipment used was a motor-driven 35-mm single-lens-reflex camera with a 300-mm lens mounted on a shoulder brace, and Kodak Tri-X film exposed at ISO 1600. Identifications of individual whales in the photographs were made by M. Bigg and G. Ellis (Pacific Biological Station, Nanaimo, B.C.).

Acoustic recordings were made with a variety of equipment, mainly a Nagra IV-SJ recorder fitted with a custom preamplifier/filter unit and a single Celesco BC-10 or BC-50 hydrophone. Frequency response of this system varied with tape speed. Tapes made at the maximum speed of 38 cm/s (15 i/s) were flat (± 3 dB) from 100 Hz to 35 kHz. Cassette recorders (Sony TC-D5M and Superscope C-205) were used during 1982-83. These systems had relatively flat responses from 100 Hz to 14 kHz.

2. Acoustic Analysis and Classification

The underwater vocalizations of killer whales are comprised of three classes of sounds: 1) clicks, 2) whistles and 3) pulsed signals (Schevill and Watkins 1966; Diercks et al. 1971, 1973; Steiner et al. 1979; Awbrey et al. 1982). Clicks are very brief (0.1-25 ms) bursts of sound, typically given in series, which are used as echolocation signals. Clicks were recorded frequently during this study, but were not subjected to analysis. Whistles of killer whales are characterized by a non-pulsed or continuous waveform, which appears on a sound spectrogram as a single narrowband tone with little or no harmonic or sideband structure (see example in Fig. 2, Ford and Fisher 1983). A great variety of whistles was recorded in this study, mainly during occasions when whales were socializing (see Ford in prep.a). No classification of whistles was attempted because of their extreme structural variability.

The third class of vocalization, pulsed signals, was the most abundant and characteristic sound produced by killer whales. These signals consisted of pulses generated at high repetition rates, resulting in distinct tonal qualities. Most pulsed sounds recorded in this study had repetition rates of 250-2000 pulses/s. Primary energy was usually between 1 and 6 kHz, with high-frequency components occasionally extending to > 30 kHz. Signal durations ranged from less than 50 ms to > 10 s, with the majority between 0.5 and 1.5 s long.

Most pulsed signals of killer whales fell into distinctive structural categories and were highly repetitive. These are referred to as "discrete calls". Different categories of discrete calls could usually be distinguished by ear. Variability in structure occurred within all discrete call categories, but certain categories tended to be more variable than others. Each call type typically had sufficient distinctive features that most structural variants could be identified without ambiguity by ear. Discrete calls were the most common acoustic signals produced by killer whales, and it is these that were analyzed extensively in this study and which form the basis of this catalogue. "Variable calls", or miscellaneous discrete sounds that were not repetitive, and aberrant renditions of pulsed calls are not included in this analysis.

Discrete Call Classification:

For initial classification, calls were transcribed from the tapes using symbolic notations that reflected the pitch and temporal patterning of the calls. Later, clear examples from each category were selected and analyzed with a Kay Elemetrics 7029A spectrum analyzer. Most spectrograms, and all those illustrated in this catalogue, were made using an 80-8000 Hz frequency range with a narrow 45-Hz filter bandwidth. These analyses served to clarify call classifications, and permitted quantitative definition and comparisons of call types.

Discrete calls were typically made up of rapidly emitted pulses which, to the ear, had a tonal quality. The repetition rate of these pulses, reflected in the interval between harmonics or sidebands seen in spectral analysis, was usually modulated over the call's duration. Many calls contained several abrupt shifts in pulse repetition rate, which allowed division of the call into different segments, or "parts". To provide a quantitative description of each call, sound patterns on spectrograms were measured using frequency and duration variables appropriate to the structure of each call type. For simple, one-part calls, the overall duration and minimum and maximum sideband intervals (SBI) were measured. In more complex calls, duration and SBI measurements were made for each separate part, and other components, such as simultaneous narrowband tones, were also measured.

An average of 8.4 variables (range = 2-17) per call was measured from about 3600 calls. These measurements were made digitally using an Apple Computer Graphics Tablet. Means, ranges, and coefficients of variation (c.v. = standard deviation x 100/mean) were calculated for each variable. Comparisons of measurements were undertaken using analysis of variance (ANOVA) with Bartlett's test of homogeneity of variances and Scheffe's pair-wise comparison of means (Sokal and Rohlf 1981).

Discrete calls were classified alphanumerically. Numbers were assigned arbitrarily in the order that calls were identified, regardless of which pod was responsible for their production. Call numbers are preceded by a letter indicating whether they were recorded from northern (N) or southern (S) community residents, or transient (T) whales.

Most discrete call types were shared by a number of pods. However, shared calls were often rendered in consistently different forms specific to each pod or groups of pods. Some of these call-type variants were so modified that they were initially given separate call numbers. Later, however, they were judged to be homologous from structural clues or from patterns of call association. Structurally-unique variants of a discrete call were distinguished by different lower-case Roman numeral suffixes. An example of a typical call type is N9, shared by

three pods, A1, A4 and A5, of the northern resident community, but given in a slightly different manner by each pod. These subtypes are identified as N9i, N9ii, and N9iii, respectively.

CATALOGUE FORMAT

In the following sections, representative spectrograms and quantitative descriptions are provided for all discrete calls and call subtypes produced by resident and transient killer whales recorded in this study. A total of 43 call types containing 28 subtypes was identified from northern resident pods (summarized in Table 3), 26 call types with 9 subtypes were identified from southern resident pods (Table 4), and 8 call types were identified from transient pods (Table 5).

Above each spectrogram, subdivisions or "parts" of the call are shown and numbered sequentially. Below the spectrogram, descriptive statistics are given for measurements of the overall duration of the call, followed by frequency and duration measurements for each component part. Descriptive statistics include mean, coefficient of variation, minimum and maximum values, and sample size. Frequency measurements are made of the harmonic or sideband interval, which varies directly with pitch. Parts containing modulations in pitch are measured at several points over their duration, usually at the start, middle and end points, and at the point of highest or lowest pitch. In some parts, the actual frequency of a certain sideband is measured rather than sideband interval, as are overlapping narrowband components (referred to as "tones"). No attempt was made to describe components at frequencies of > 8000 Hz.

For calls that are shared by two or more pods, the results of statistical comparisons of frequency and duration variables between each pod's rendition of the call are summarized. Levels of significance resulting from tests of a null hypothesis that variable measurements were equal are given. If only two pods were compared, the results of these tests are included in the table of descriptive statistics. For comparisons involving three or more pods, results are tabulated following description of the call. No tests was conducted if any sample contained less than 10 measurements.

The following abbreviations are used in the tables:

a. General

C.V. = coefficient of variation (standard deviation/mean x 100)
n = sample size
Min = minimum value of measurement
Max = maximum value of measurement
p = probability level from Scheffe's test

ns = no significant differences resulting from Scheffe's test

b. Frequency measurements

SBI = sideband interval
Hz = frequency in Hertz
kHz = frequency in kiloHertz
f = frequency
^f = change in frequency
SB2 = second sideband or harmonic

c. Duration measurements

Dur = duration
ms = millisecond
s = second
IPI = interpulse interval
PRL = pulse rate leveling (or, point at which pitch stops increasing or decreasing)

d. Pod identification

Na = captive whale "Namu"
Sh = captive whale "Shamu"
MD = captive whale "Moby Doll"
64 = field recordings made in 1964
73 = field or captive recordings made in 1973

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Table 1. Size and composition of resident pods in 1983. Original pod identities are used in this catalogue. Current pod designations result from recent analyses of social associations by M. Bigg (pers. comm. 1986).

Orig. Pod	Curr. Pod	Size	No. of bulls	No. of cows	No. of juveniles	No. of calves
Northern Resident Community:						
A1	A1	15	5	4	6	0
A4	A4	9	1	3	3	2
A5	A5	12	1	4	7	0
B	B	7	4	1	2	0
C	C	9	3	2	4	0
D	D	9	2	3	4	0
G	G1	20	4	5	11	0
	G12	7	0	2	5	0
H	H	5	1	2	2	0
I1	I1	6	1	2	2	1
	I2	7	3	2	2	0
	I18	11	0	4	5	2
I11	I11	11	0	3	6	2
I31	I31	5	1	1	3	0
R	R	17	6	6	5	0
W	W	4	2	1	1	0
Southern Resident Community:						
J	J	19	3	8	8	0
K	K	15	4	7	4	0
L	L	44	6	18	20	0
Total:		232	47	78	100	7

Table 2. Size and composition of transient pods in 1983.

Pod	Size	No. of bulls	No. of cows	No. of juveniles	No. of calves
E1	1	1	0	0	0
F1	1	1	0	0	0
M2	3	1	1	1	0
N1	1	1	0	0	0
O2	2	0	2	0	0
O5	2	1	1	0	0
O10	2	0	2	0	0
O21	3	1	2	1	0
P1	1	1	0	0	0
Q1	3	0	1	2	0
Q3	3	0	1	2	0
Q4	2	0	1	1	0
Q9	2	0	1	1	0
S1	3	0	1	2	0
S5	2	0	2	0	0
S8	1	0	1	0	0
S10	3	0	?	?	?
T1	5	?	?	?	?
U1	4	0	2	2	0
V1	2	1	1	0	0
V10*	8	?	?	?	?
X1	5	0	3	2	0
Y2	3	1	1	1	0
Z1	2	1	1	0	0
Z50	1	1	0	0	0
Z60	1	1	0	0	0
Total:	66	12±	24±	15±	0±

* V10 may consist of two or more pods.

Table 3. Call types and subtypes produced by pods of the northern resident community. Clan designation includes pods that share call types.

Call		Pod												
		A-clan								G-clan			R-clan	
		A1	A4	A5	B	C	D	H	I1	G	I11	I31	R	W
N1	i	X												
	ii				X				X					
	iii					X	X							
	iv							X	X					
	v		X											
N2		X	X	X										
N3		X	X	X	X	X	X	X	X					
N4		X	X	X										
N5	i	X	X	X	X			X	X					
	ii				X			X	X					
N7	i	X	X	X										
	ii	X	X	X				X	X					
	iii				X				X					
	iv					X	X							
N8	i	X	X	X				X						
	ii					X	X							
	iii				X				X					
	iv				X				X					
N9	i	X												
	ii		X											
	iii			X										
N10		X	X	X										
N11	i	X	X	X	X									
	ii				X	X	X	X						

continued...

Table 3. (cont'd)

Call	Pod												
	A-clan								G-clan			R-clan	
	A1	A4	A5	B	C	D	H	I1	G	I11	I31	R	W
N12	X	X	X	X	X	X	X	X					
N13		X	X										
N16 i				X									
N16 ii					X	X							
N16 iii							X	X					
N16 iv								X					
N17			X										
N18				X	X								
N19		X											
N20				X	X	X		X					
N21				X									
N23 i										X	X		
N23 ii									X				
N24										X	X		
N25									X	X			
N26										X	X		
N27	X												
N28									X				
N29									X				
N30										X	X		
N32 i												X	X
N32 ii												X	
N33												X	X
N34												X	X
N35												X	X
N38									X				
N39									X				

continued...

Table 3. (cont'd)

	Pod												
	A-clan								G-clan			R-clan	
Call	A1	A4	A5	B	C	D	H	I1	G	I11	I31	R	W
N40									X	X	X		
N41									X	X	X		
N42												X	X
N43												X	X
N44									X				
N45										X	X		
N46										X	X		
N47	X												
N48									X	X	X		
N50												X	X
N51												X	X
Total	14	14	13	14	9	8	9	13	10	10	9	9	8

Table 4. Call types and subtypes produced by pods of the southern resident community.

Call	Pod J	Pod K	Pod L	Call	Pod J	Pod K	Pod L
S1	X	X		S16		X	X
S2 i	X			S17		X	X
S2 ii	X			S18			X
S2 iii			X	S19			X
S3	X			S22			X
S4	X	X		S31			X
S5	X	X		S33			X
S6	X	X	X	S36			X
S7	X	X		S37 i	X		
S8 i	X	X		S37 ii			X
S8 ii			X	S40			X
S9	X			S41	X		
S10	X	X	X	S42	X	X	X
S12	X			S44	X		
S13 i	X						
S13 ii			X				
S14	X			Total:	18	10	15

Table 5. Call types recorded from transient pods. Repertoires of some pods are likely incomplete due to tendency of transient whales to vocalize infrequently.

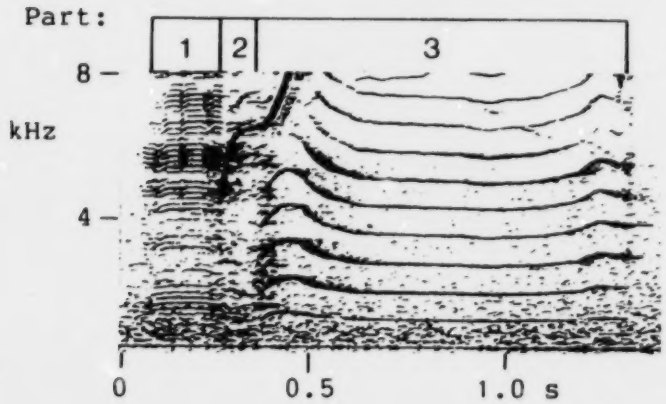
Call	Pod AO[1]	M2	O5	O10	O21	Q1	Q3	X1	Y2	?[2]
T1	X	X	X	X	X	X	X	X	X	X
T2	X	X	X	X			X	X		
T3								X		
T4								X		
T5								X		
T6								X		
T7	X	X	X	X	X	X			X	X
T8	X	X	X						X	X
Total:	4	4	4	3	2	2	2	6	3	3

[1] AO pod is a group of 4 whales recorded in southeast Alaska. It has not been sighted in British Columbia waters.

[2] Unidentified pod of 3 whales recorded at Soberanes Point, California. This group is not known in British Columbia.

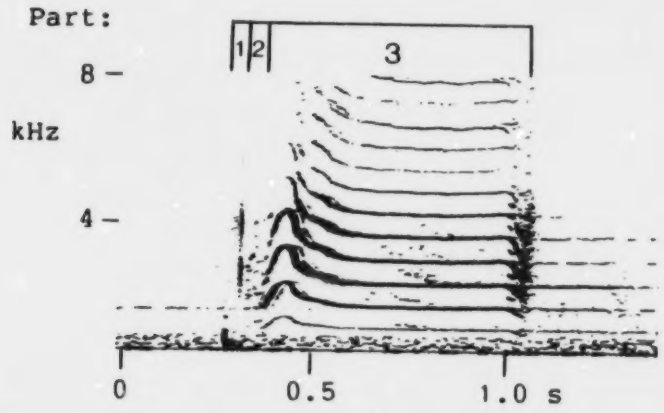
NORTHERN COMMUNITY CALLS:

CALL N1i



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	1339	13.6	931	1772	26
Part 1:						
Dur (ms)	A1	212	14.1	130	274	26
SBI (Hz)	A1	161	13.2	120	203	18
Part 2:						
Dur (ms)	A1	117	20.5	78	160	26
Part 3:						
Dur (ms)	A1	1011	17.6	626	1373	26
SBI, start (Hz)	A1	870	17.7	515	1135	26
SBI, peak (Hz)	A1	1010	5.5	921	1119	26
SBI, mid (Hz)	A1	784	5.1	715	858	26
SBI, end (Hz)	A1	975	11.5	813	1263	26
Tone: f, start (Hz)	A1	4407	10.6	3305	5375	24

CALL N1ii



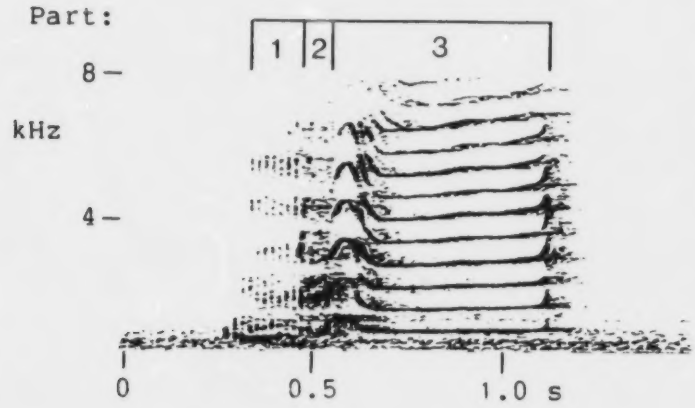
Measurement	Pod	Mean	C.V.	Min	Max	n	p
Duration (ms)	B	997	12.2	811	1346	28	ns
	I1	1051	10.3	839	1270	26	
Part 1:							
Dur (ms)	B	119	29.0	54	220	28	<0.001
	I1	180	45.6	92	397	29	
SBI (Hz)	B	80	22.7	52	133	20	<0.001
	I1	55	33.4	24	83	15	
Part 2:							
Dur (ms)	B	36	47.4	4	66	27	<0.01
	I1	53	45.2	9	90	28	
Part 3:							
Dur (ms)	B	798	16.3	607	1156	28	ns
	I1	762	16.3	556	1071	29	
SBI, start (Hz)	B	815	24.8	399	1165	28	ns
	I1	859	13.9	579	1067	26	
SBI, peak (Hz)	B	1029	8.8	860	1297	28	ns
	I1	979	19.0	100	1115	28	
SBI, mid (Hz)	B	708	7.0	610	808	28	<0.001
	I1	788	7.2	694	887	24	

continued...

CALL N1ii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n	p
SBI, end (Hz)	B	663	7.0	590	767	28	ns
	I1	697	19.7	100	829	28	
Tone:							
f, start (Hz)	B	3368	23.4	2575	5633	25	<0.001
	I1	2520	20.3	1970	3898	25	

CALL N1iii



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	C	835	10.6	643	948	31
	D	846	14.8	569	1016	24
	Na	901	14.4	687	1171	17
Part 1:						
Dur (ms)	C	152	30.6	64	278	31
	D	173	31.1	90	320	26
	Na	171	31.1	89	292	17

continued...

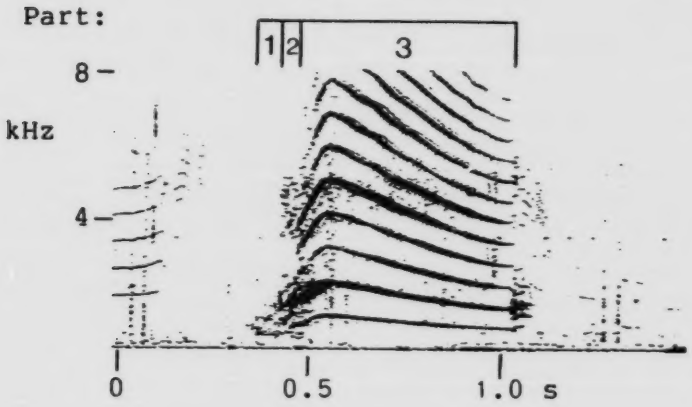
CALL N1iii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 2:						
SBI (Hz)	C	49	18.6	32	77	28
	D	49	11.7	37	59	20
	Na	40	11.5	32	53	17
Dur (ms)	C	40	34.6	8	73	31
	D	45	37.1	2	68	26
	Na	36	41.0	17	59	17
Part 3:						
Dur (ms)	C	594	13.0	442	730	31
	D	580	15.1	366	693	26
	Na	648	18.9	419	833	17
SBI, start (Hz)	C	828	16.2	544	1080	29
	D	940	16.7	507	1190	26
	Na	707	20.4	500	976	17
SBI, peak (Hz)	C	1035	11.1	588	1183	31
	D	1117	7.9	961	1441	26
	Na	1097	5.8	1000	1222	17
SBI, mid (Hz)	C	674	7.4	571	775	29
	D	666	6.9	574	767	26
	Na	621	7.0	560	707	17
SBI, end (Hz)	C	657	8.9	504	757	29
	D	685	6.1	599	746	26
	Na	657	5.7	598	736	17
Tone: f, start (Hz)	C	3884	15.9	3032	5065	13
	D	3784	13.9	2866	4735	18
	Na	3174	19.1	2614	5422	17

CALL N1iii - Measurement Comparisons

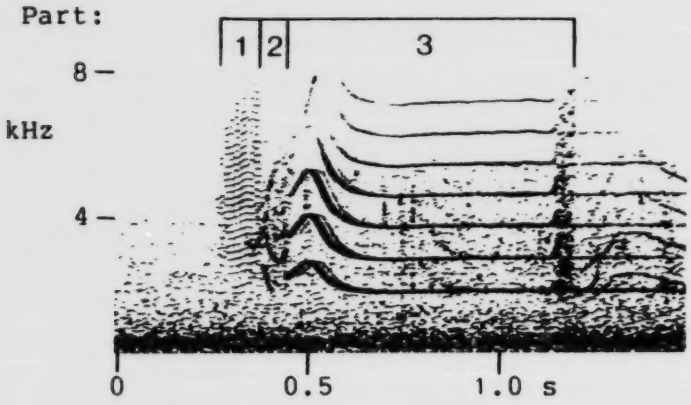
Measurement	C vs D	C vs Na	D vs Na
Duration (ms)	ns	ns	ns
Part 1:			
Dur (ms)	ns	ns	ns
SBI (Hz)	ns	<0.001	<0.001
Part 2:			
Dur (ms)	ns	ns	ns
Part 3:			
Dur (ms)	ns	ns	ns
SBI, start (Hz)	<0.05	<0.05	<0.001
SBI, peak (Hz)	<0.05	ns	ns
SBI, mid (Hz)	ns	<0.01	<0.05
SBI, end (Hz)	ns	ns	ns
Tone: f, start (Hz)	ns	<0.01	<0.05

CALL N1iv



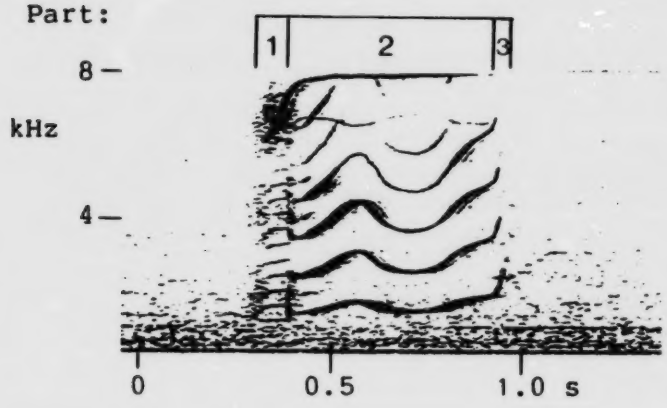
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	H	768	12.6	642	1026	25
Part 1:						
Dur (ms)	H	82	37.0	33	160	25
SBI (Hz)	H	82	20.3	40	113	20
Part 2:						
Dur (ms)	H	51	40.0	14	111	25
Part 3:						
Dur (ms)	H	632	11.3	517	805	25
SBI, start (Hz)	H	787	11.2	531	916	25
SBI, peak (Hz)	H	958	4.3	875	1028	25
SBI, mid (Hz)	H	575	10.6	467	704	25
Tone: f, start (Hz)	H	2825	14.2	2330	3498	12

CALL N1v



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A4	827	18.3	594	1099	20
Part 1:						
Dur (ms)	A4	105	21.7	60	164	20
SBI (Hz)	A4	173	15.6	130	218	17
Part 2:						
Dur (ms)	A4	30	42.2	2	55	20
Part 3:						
Dur (ms)	A4	648	20.4	434	897	20
SBI, start (Hz)	A4	870	15.4	656	1213	20
SBI, peak (Hz)	A4	1428	5.7	1292	1568	20
SBI, mid (Hz)	A4	1000	6.9	953	1150	20
SBI, end (Hz)	A4	1012	7.2	899	1135	20
Tone: f, start (Hz)	A4	4192	15.5	3109	5310	18

CALL N2



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	664	21.00	511	1066	31
	A4	654	19.39	468	942	25
	A5	715	17.26	504	1030	30
Part 1:						
Dur (ms)	A1	71	86.99	30	395	31
	A4	75	89.83	23	289	25
	A5	55	41.04	16	103	30
SBI (Hz)	A1	479	14.58	291	611	30
	A4	493	11.81	373	580	18
	A5	473	12.28	362	574	23
Part 2:						
Dur (ms)	A1	593	20.68	460	1001	31
	A4	578	18.96	415	775	25
	A5	659	18.07	438	929	30
SBI, start (Hz)	A1	1046	8.21	830	1191	31
	A4	1185	9.12	1022	1419	25
	A5	1081	9.11	832	1295	30

continued...

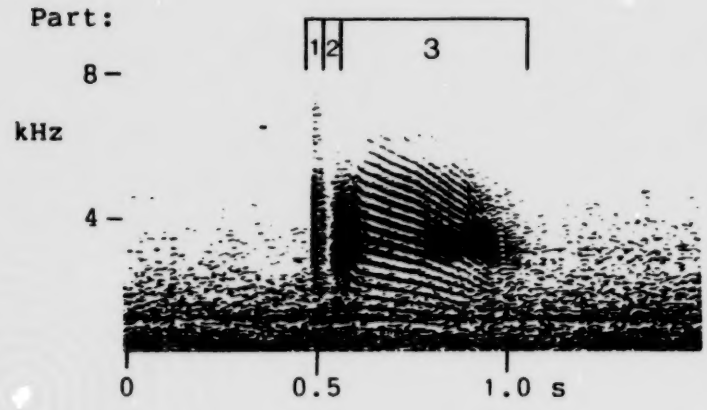
CALL N2 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, 1st peak (Hz)	A1	1455	5.62	1320	1608	31
	A4	1569	12.15	1206	2098	25
	A5	1679	11.45	1179	2049	30
SBI, end (Hz)	A1	1604	10.35	1418	2062	31
	A4	1928	11.20	1648	2459	24
	A5	1954	17.57	1515	2766	30
Time to 1st peak (Hz)	A1	179	24.29	98	265	31
	A4	94	25.50	56	168	25
	A5	133	19.85	83	208	30
Part 3:						
Dur (ms)	A1	61	47.56	27	109	7
	A4	60	36.28	32	127	24
	A5	66	26.97	33	104	29
f, SB2, end (Hz)	A1	5114	27.33	3829	7913	8
	A4	6384	12.98	4906	7935	25
	A5	6660	11.86	5352	7943	29
Tone:						
f, start (Hz)	A1	6396	8.21	5229	7544	31
	A4	6331	7.90	5590	7114	25
	A5	6435	9.19	4825	7253	26
f, midpoint (Hz)	A1	7631	10.66	3326	7982	31
	A4	7311	22.04	2418	8020	17
	A5	7869	1.70	7559	8081	17

CALL N2 - Measurement Comparisons

Measurements	A1 vs A4	A1 vs A5	A4 vs A5
Duration (ms)	ns	ns	ns
Part 1:			
Dur (ms)	ns	ns	ns
SBI (Hz)	ns	ns	ns
Part 2:			
Dur (ms)	ns	ns	ns
SBI, start (Hz)	<0.001	ns	<0.001
SBI, 1st peak (Hz)	--	--	--
SBI, end (Hz)	<0.001	<0.001	ns
Time to 1st peak (Hz)	<0.001	<0.001	<0.001
Part 3:			
Dur (ms)	ns	ns	ns
f, SB2, end (Hz)	<0.01	<0.001	ns
Tone: f, start (Hz)	ns	ns	ns
f, midpoint (Hz)	ns	ns	ns

CALL N3



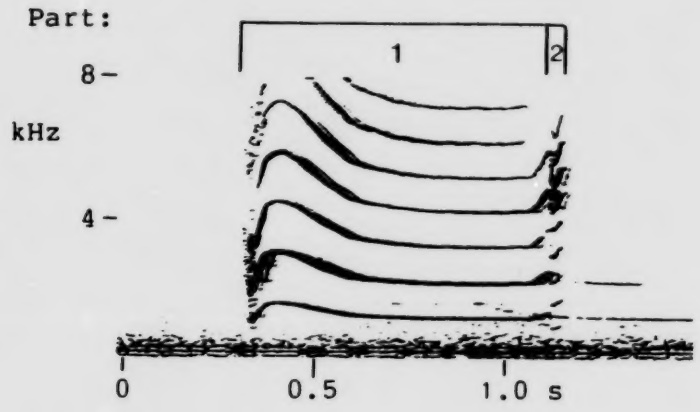
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	474	34.8	239	819	28
	A4	531	18.3	405	634	5
	A5	439	22.4	268	574	11
	B	731	35.3	509	1102	4
	C	628	27.4	438	903	7
Part 1:						
Dur (ms)	A1	27	80.0	8	77	17
	A4	22	100.0	11	55	4
	A5	18	56.5	7	42	9
	B	16	12.5	14	18	3
	C	15	----	--	--	1
Part 2:						
Dur (ms)	A1	51	58.8	8	111	28
	A4	49	45.2	17	78	5
	A5	69	44.3	21	121	11
	B	68	19.8	52	85	4
	C	91	30.8	45	127	7

continued...

CALL N3 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, start (Hz)	A1	301	28.2	193	518	17
	A4	343	13.9	276	383	4
	A5	363	16.5	271	473	9
	B	272	17.5	222	317	3
	C	323	----	---	---	1
SBI, peak (Hz)	A1	413	33.6	250	658	17
	A4	471	11.7	422	549	4
	A5	447	19.4	307	592	9
	B	370	24.2	274	457	4
	C	568	24.8	429	752	7
SBI, end (Hz)	A1	286	24.2	170	463	28
	A4	277	26.7	237	409	5
	A5	281	25.2	156	413	11
	B	284	17.0	236	334	4
	C	335	10.1	288	387	7
Part 3:						
Dur (ms)	A1	440	34.1	239	779	28
	A4	489	18.3	405	592	5
	A5	393	22.7	240	538	11
	B	690	39.2	469	1083	4
	C	599	30.0	393	887	7
SBI, end (Hz)	A1	123	23.1	71	182	28
	A4	118	21.4	77	143	5
	A5	131	16.7	97	167	11
	B	143	15.9	117	165	4
	C	180	20.3	126	223	7

CALL N4



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	735	29.3	197	1028	39
	A4	772	31.3	211	1171	35
	A5	781	35.3	226	1177	42
Part 1:						
Dur (ms)	A1	723	30.3	197	1028	39
	A4	719	34.5	211	1125	36
	A5	719	36.5	222	1115	42
SBI, start (Hz)	A1	884	22.3	526	1355	39
	A4	877	18.0	572	1257	36
	A5	906	17.4	530	1269	42
SBI, peak (Hz)	A1	1429	5.5	1230	1576	39
	A4	1464	5.2	1246	1710	36
	A5	1380	6.7	1170	1627	42
SBI, end (Hz)	A1	1178	6.1	1062	1270	7
	A4	1205	8.8	995	1464	30
	A5	1160	10.2	672	1322	25
^f, upsweep at end (Hz)	A1	252	84.3	13	673	7
	A4	416	38.7	150	880	30
	A5	214	42.4	39	439	25

continued...

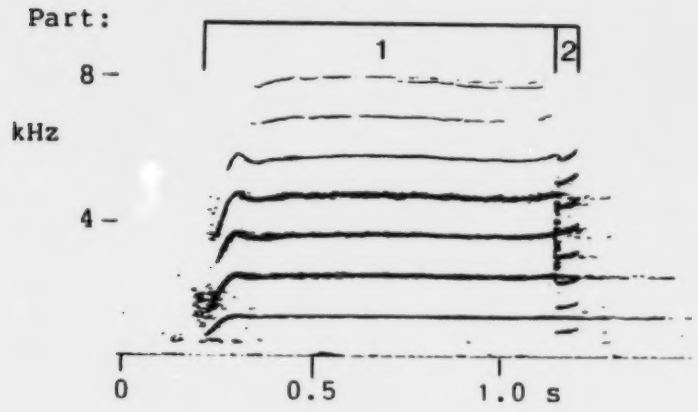
CALL N4 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 2:						
Dur (ms)	A1	35	28.7	18	49	13
	A4	41	26.0	24	73	33
	A5	65	27.1	6	100	40
SBI (Hz)	A1	709	30.0	395	1056	13
	A4	712	14.4	492	949	33
	A5	703	9.5	444	791	40

CALL N4 - Measurement Comparisons

Measurement	A1 vs A4	A1 vs A5	A4 vs A5
Duration (ms)	ns	ns	ns
Part 1:			
Dur (ms)	ns	ns	ns
SBI, start (Hz)	ns	ns	ns
SBI, peak (Hz)	ns	<0.05	<0.001
SBI, end (Hz)	ns	ns	ns
^f, upsweep at end (Hz)	<0.05	ns	<0.001
Part 2:			
Dur (ms)	ns	<0.001	<0.001
SBI (Hz)	ns	ns	ns

CALL N5i



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	989	11.0	703	1224	33
	A4	956	17.9	504	1168	13
	A5	992	24.6	405	1281	24
	B	842	26.6	505	1272	28
	H	749	18.3	595	1044	20
	I1	663	16.6	545	916	13
Part 1:						
Dur (ms)	A1	953	11.7	666	1224	33
	A4	901	20.2	427	1121	13
	A5	924	25.8	330	1190	24
	B	785	28.2	477	1199	28
	H	601	20.5	459	915	20
	I1	608	15.7	474	785	13
SBI, start (Hz)	A1	1035	13.7	743	1339	33
	A4	998	20.6	687	1345	13
	A5	960	17.5	570	1213	24
	B	1021	8.5	734	1179	28
	H	1121	15.6	683	1396	19
	I1	1058	10.3	891	1318	13

continued...

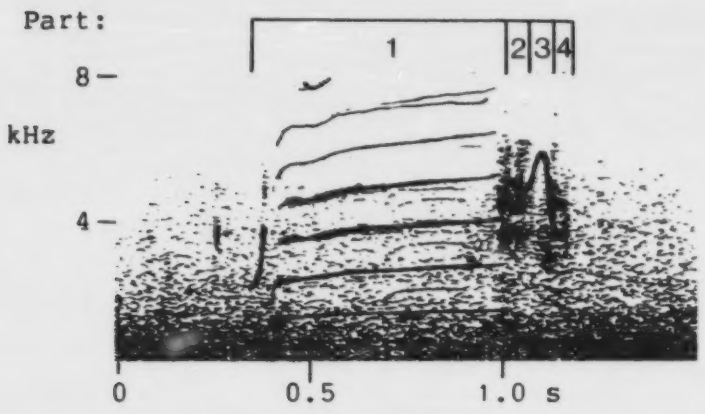
CALL N5i - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, mid (Hz)	A1	1197	12.2	1009	1578	33
	A4	1230	13.6	1055	1566	13
	A5	1171	8.7	1005	1504	24
	B	1211	6.3	1076	1375	28
	H	1281	4.2	1155	1359	19
	I1	1211	5.1	1130	1346	13
SBI, end (Hz)	A1	1276	16.2	1034	1842	33
	A4	1372	18.3	916	1751	13
	A5	1277	12.3	1071	1682	24
	B	1264	10.0	1045	1636	28
	H	1291	6.5	1173	1485	19
	I1	1261	5.3	1159	1419	13
^f, SB3, 1st peak	A1	378	67.2	58	970	26
	A4	287	43.0	223	507	5
	A5	324	37.4	151	562	11
	B	---	----	---	---	--
	H	366	28.9	150	511	15
	I1	---	----	---	---	--
Part 2:						
Dur (ms)	A1	29	22.4	17	45	29
	A4	35	27.3	24	62	13
	A5	48	23.0	29	69	24
	B	26	37.0	14	51	28
	H	92	32.6	27	140	20
	I1	33	71.1	16	108	13
SBI (Hz)	A1	714	18.2	467	1044	29
	A4	719	18.2	565	968	13
	A5	771	14.0	525	1061	24
	B	491	28.2	300	779	28
	H	724	12.2	487	935	19
	I1	512	31.8	284	840	13
Tone:						
f, start (Hz)	A1	5766	25.6	2585	7916	32
	A4	6637	9.9	5132	7844	13
	A5	6314	17.0	2678	7795	23
	B	2588	26.1	1402	4224	28
	H	2936	16.0	2095	3732	17
	I1	2165	17.0	1805	3092	12

CALL N5i - MEASUREMENT COMPARISONS

Comparison	Duration	Part 1			Part 2		Tone
		Dur	SBI start	SBI end	Dur	SBI	f, start
A1 vs A4	ns	ns	ns	ns	ns	ns	ns
A1 vs A5	ns	ns	ns	ns	<0.05	ns	ns
A1 vs B	ns	<0.05	ns	ns	ns	<0.001	<0.001
A1 vs H	<0.001	<0.001	ns	ns	<0.001	ns	<0.001
A1 vs I1	<0.001	<0.001	ns	ns	ns	<0.001	<0.001
A4 vs A5	ns	ns	ns	ns	<0.01	ns	ns
A4 vs B	ns	ns	ns	ns	ns	<0.001	<0.001
A4 vs H	ns	<0.001	ns	ns	<0.001	ns	<0.001
A4 vs I1	<0.01	<0.01	ns	ns	ns	<0.01	<0.001
A5 vs B	ns	ns	ns	ns	<0.001	<0.001	<0.001
A5 vs H	<0.01	<0.001	<0.05	ns	<0.001	ns	<0.001
A5 vs I1	<0.001	<0.001	ns	ns	ns	<0.001	<0.001
B vs H	ns	<0.05	ns	ns	<0.001	<0.001	ns
B vs I1	ns	ns	ns	ns	ns	ns	ns
H vs I1	ns	ns	ns	ns	<0.001	<0.01	ns

CALL N5ii



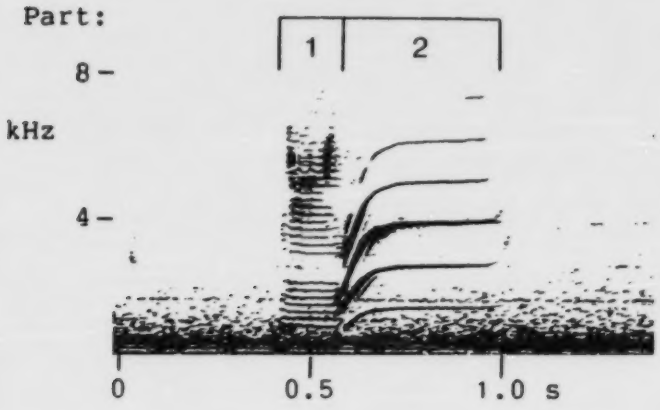
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	B	657	9.6	573	759	9
	H	736	11.4	640	960	15
	I1	921	10.0	751	1029	9
Part 1:						
Dur (ms)	B	618	8.4	539	717	9
	H	553	19.2	461	787	15
	I1	731	10.3	604	806	9
SBI, start (Hz)	B	1124	7.6	997	1246	9
	H	1026	16.9	746	1218	15
	I1	1113	8.6	957	1285	9
SBI, mid (Hz)	B	1257	2.8	1215	1331	9
	H	1279	4.4	1211	1410	15
	I1	1299	4.0	1211	1374	9
SBI, end (Hz)	B	1283	8.6	1047	1366	9
	H	1296	5.3	1175	1399	15
	I1	1331	6.0	1193	1445	9
^f, SB3,	B	---	----	---	---	--
1st part (Hz)	H	311	36.3	91	592	15
	I1	---	----	---	---	--

continued...

CALL N5ii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 2:						
Dur (ms)	B	22	23.8	14	30	9
	H	92	16.5	66	119	15
	I1	33	30.4	17	48	9
SBI (Hz)	B	564	37.4	260	866	9
	H	711	6.2	649	798	15
	I1	508	23.5	362	723	9
Parts 3 and 4:						
Dur (ms)	B	117	9.9	96	133	9
	H	90	24.1	62	156	15
	I1	132	26.3	84	193	9
Part 3:						
f, peak (Hz)	B	6099	6.1	5354	6612	9
	H	4172	----	---	---	1
	I1	7012	11.5	5877	7989	6
Part 4:						
SBI (Hz)	B	752	13.3	631	938	9
	H	796	11.1	678	1010	15
	I1	891	17.6	569	1082	9
Tone:						
f, start (Hz)	B	2811	30.0	2163	4976	9
	H	3231	19.1	2452	4916	15
	I1	2517	16.3	2146	3352	8

CALL N7i



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	570	24.1	418	929	27
	A4	702	11.5	577	868	19
	A5	692	19.1	496	949	25
Part 1:						
Dur (ms)	A1	198	23.3	136	345	27
	A4	166	14.4	116	215	19
	A5	172	21.6	98	255	25
SBI (Hz)	A1	147	13.0	120	180	27
	A4	172	17.6	144	226	13
	A5	164	15.1	128	216	22
Part 2:						
Dur (ms)	A1	371	33.2	243	653	27
	A4	535	13.2	405	679	19
	A5	519	21.7	339	729	25
Time to PRL (ms)	A1	84	20.0	57	132	27
	A4	75	24.6	50	113	19
	A5	96	18.6	65	141	25
SBI (Hz)	A1	1271	9.0	1092	1477	27
	A4	1349	4.5	1223	1466	19
	A5	1379	4.6	1281	1506	25

CALL N7i - Measurement Comparisons			
Measurement	A1 vs A4	A1 vs A5	A4 vs A5
Duration (ms)	<0.01	<0.01	ns
Part 1:			
Dur (ms)	<0.05	<0.05	ns
SBI (Hz)	ns	ns	ns
Part 2:			
Dur (ms)	<0.001	<0.001	ns
Time to PRL (ms)	ns	<0.05	<0.001
SBI (Hz)	ns	<0.001	ns

CALL N7ii

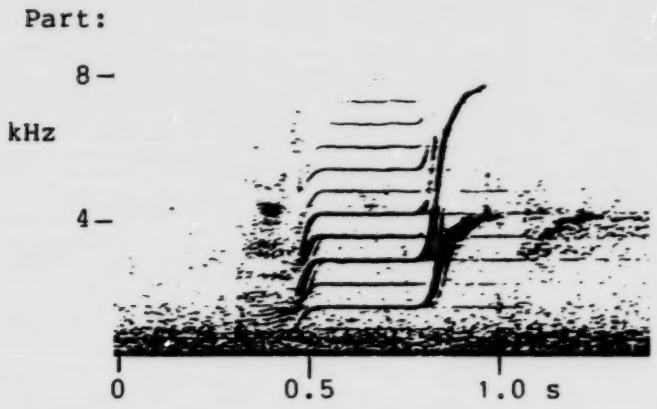
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	722	16.2	516	863	8
	A4	720	17.6	528	872	9
	A5	775	17.3	568	915	9
	H	886	19.1	495	1223	38
	I1	831	15.1	596	989	10
Part 1:						
Dur (ms)	A1	174	20.1	125	240	8
	A4	173	25.4	86	223	9
	A5	153	17.6	122	187	9
	H	160	27.6	105	303	38
	I1	152	21.9	99	200	10
SBI (Hz)	A1	160	10.1	128	179	8
	A4	168	17.6	121	203	8
	A5	135	6.8	120	147	9
	H	225	17.7	166	309	24
	I1	210	17.5	160	247	6
Part 2:						
Dur (ms)	A1	461	26.4	279	597	8
	A4	458	16.4	366	546	9
	A5	541	18.5	347	625	9
	H	462	11.5	344	603	38
	I1	442	22.0	263	613	10

continued...

CALL N7ii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Time to PRL (ms)	A1	83	15.3	67	105	8
	A4	70	20.4	47	92	9
	A5	95	33.3	61	152	9
	H	77	47.8	46	256	38
	I1	59	19.6	40	77	10
SBI (Hz)	A1	1330	7.5	1172	1434	8
	A4	1313	5.6	1188	1405	9
	A5	1399	5.7	1257	1483	9
	H	1359	3.3	1194	1458	38
	I1	1394	6.6	1264	1581	10
Part 3:						
Dur (ms)	A1	85	40.8	42	146	8
	A4	88	47.9	40	165	9
	A5	81	47.4	38	152	9
	H	333	17.4	171	411	30
	I1	263	11.5	221	309	9
SBI, start (Hz)	A1	1346	7.9	1166	1444	8
	A4	1309	5.4	1196	1381	9
	A5	1407	4.9	1278	1471	9
	H	1341	5.1	1158	1588	36
	I1	1412	10.5	1157	1602	10
f, SB2, end (Hz)	A1	3986	29.3	2469	5972	8
	A4	3855	14.0	3194	4568	9
	A5	3963	14.4	3227	4882	9
	H	6253	13.1	3205	6921	32
	I1	7021	6.2	6391	7503	10

CALL N7iii



Measurement	Pod	Mean	C.V.	Min	Max	n	p
Duration (ms)	B	768	11.0	626	922	24	<0.05
	I1	695	10.1	555	786	10	
Part 1:							
Dur (ms)	B	139	21.0	93	182	24	ns
	I1	163	27.4	97	231	10	
SBI (Hz)	B	134	17.4	83	175	19	<0.05
	I1	157	7.3	137	168	10	
Part 2:							
Dur (ms)	B	417	15.4	325	571	24	<0.001
	I1	330	14.4	257	374	10	
Time to PRL (ms)	B	59	19.6	45	96	24	<0.001
	I1	29	57.9	9	61	10	
SBI (Hz)	B	647	5.4	566	705	24	ns
	I1	678	7.8	630	792	10	

continued...

CALL N7iii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n	p
Part 3:							
Dur (ms)	B	211	19.3	168	359	24	ns
	I1	226	20.9	156	289	10	
SBI, start (Hz)	B	1259	5.0	1149	1361	24	ns
	I1	1275	4.5	1185	1387	10	
f, SB2, end (Hz)	B	7642	2.5	7303	7953	24	<0.01
	I1	7896	3.1	7694	8401	10	

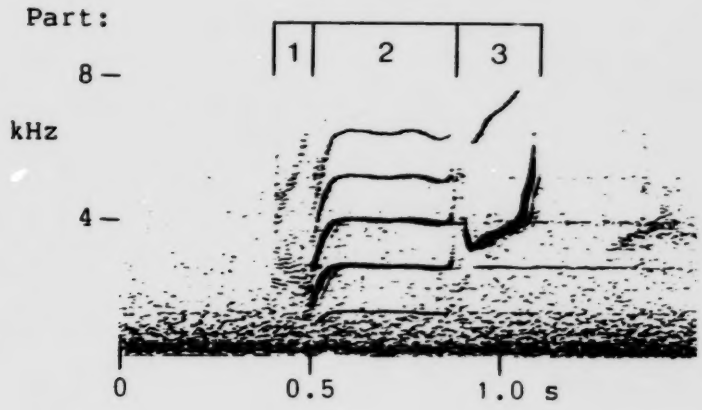
CALL N7iv - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 3:						
Dur (ms)	C	529	9.6	405	632	28
	D	477	16.3	368	646	28
	Na	533	12.8	440	684	16
SBI, start (Hz)	C	3023	15.5	967	3711	28
	D	3388	9.9	2449	4272	24
	Na	3074	8.1	2686	3543	9
f, SB1, end (Hz)	C	6006	11.8	5069	7889	28
	D	6503	11.2	5193	7854	28
	Na	5974	9.8	4592	6807	16

CALL N7iv - Measurement Comparisons

Measurement	C vs D	C vs Na
Duration (ms)	ns	ns
Part 1:		
Dur (ms)	ns	ns
SBI (Hz)	ns	<0.001
Part 2:		
Dur (ms)	<0.001	ns
Time to PRL (ms)	<0.001	<0.001
SBI (Hz)	ns	ns
Part 3:		
Dur (ms)	<0.01	ns
SBI, start (Hz)	--	--
f, SB1, end (Hz)	<0.05	ns

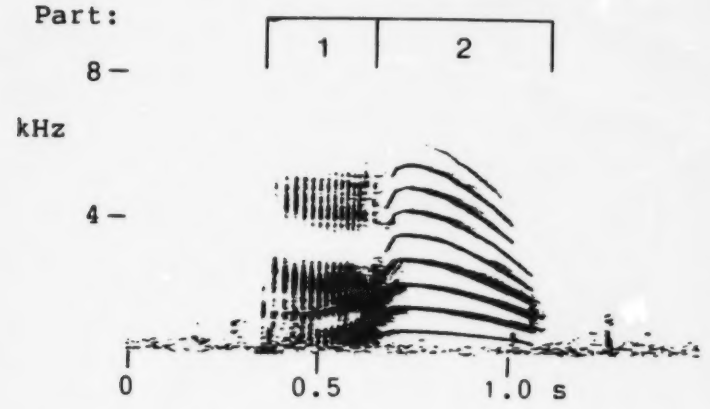
CALL N7iv



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	C	658	12.9	508	832	28
	D	605	20.0	446	851	28
	Na	654	11.3	538	800	16
Part 1:						
Dur (ms)	C	94	29.4	46	144	21
	D	88	42.0	45	152	23
	Na	81	26.8	45	127	16
SBI (Hz)	C	146	14.9	96	179	15
	D	143	13.2	107	168	19
	Na	111	17.5	85	145	16
Part 2:						
Dur (ms)	C	383	9.6	285	460	30
	D	340	15.6	254	467	28
	Na	377	12.2	307	484	16
Time to PRL (ms)	C	71	37.8	43	197	30
	D	55	32.1	33	110	28
	Na	39	18.7	27	49	16
SBI (Hz)	C	1354	2.1	1285	1401	30
	D	1362	2.6	1298	1423	28
	Na	1382	4.8	1244	1484	16

continued...

CALL N8i



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	614	17.7	369	802	15
	A4	603	9.2	491	705	22
	A5	665	9.8	583	867	29
	H	712	11.8	446	880	32
Part 1:						
Dur (ms)	A1	487	19.1	225	623	26
	A4	446	12.3	325	548	22
	A5	444	14.2	357	602	29
	H	312	19.7	101	402	32
IPI, start (ms)	A1	21	16.3	16	30	24
	A4	24	18.5	17	32	19
	A5	25	17.4	17	36	27
	H	29	17.9	19	47	31
Part 2:						
Dur (ms)	A1	171	26.7	102	280	26
	A4	157	10.9	121	194	22
	A5	221	10.1	171	265	29
	H	399	10.0	306	478	32

continued...

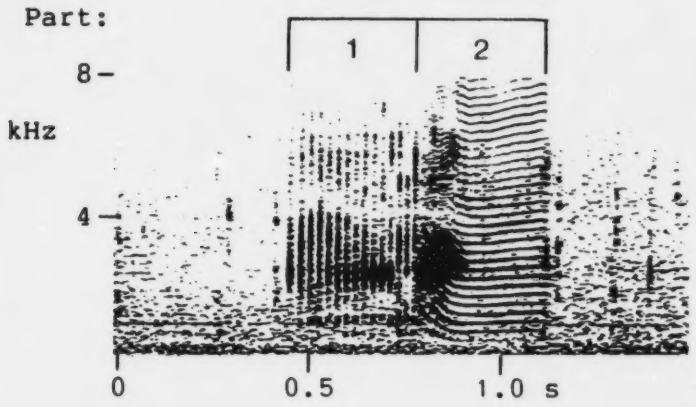
CALL N8i - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, start (Hz)	A1	255	23.4	180	381	12
	A4	355	15.0	241	469	22
	A5	312	16.5	229	404	29
	H	487	25.4	216	677	32
SBI, peak (Hz)	A1	377	11.8	323	440	11
	A4	439	9.0	364	512	22
	A5	435	7.9	365	528	29
	H	670	25.1	273	913	32
SBI, end (Hz)	A1	214	23.7	132	348	15
	A4	301	14.1	217	378	22
	A5	255	14.8	173	323	29
	H	277	27.3	114	434	32

CALL N8i - Measurement Comparisons

Measurement	A1 vs A4	A1 vs A5	A4 vs A5	A's vs H
Duration (ms)	ns	ns	<0.05	<0.01
Part 1:				
Dur (ms)	ns	ns	ns	<0.001
IPI, start (ms)	ns	<0.01	ns	<0.01
Part 2:				
Dur (ms)	ns	<0.001	<0.001	<0.001
SBI, start (Hz)	<0.001	<0.05	<0.05	<0.001
SBI, peak (Hz)	<0.001	<0.001	ns	<0.001
SBI, end (Hz)	<0.001	<0.05	<0.01	ns

CALL N8ii



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	C	557	17.7	445	801	28
	D	552	17.6	407	733	29
	Na	649	17.0	451	919	16
Part 1:						
Dur (ms)	C	231	15.9	147	303	28
	D	263	33.3	153	432	28
	Na	233	24.9	174	420	16
IPI, start (ms)	C	29	13.4	22	36	27
	D	30	10.4	26	37	29
	Na	31	12.1	25	38	16
Part 2:						
Dur (ms)	C	325	30.7	192	582	28
	D	297	22.5	228	595	29
	Na	416	22.4	277	575	16
SBI, start (Hz)	C	315	24.3	137	457	28
	D	295	17.9	146	419	28
	Na	241	17.9	156	351	16

continued...

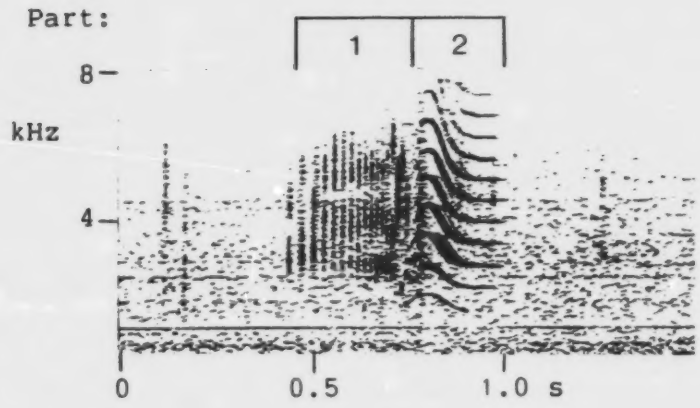
CALL N8ii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, midpoint (Hz)	C	253	11.1	204	318	28
	D	257	8.6	192	309	29
	Na	255	10.9	214	307	16
SBI, end (Hz)	C	251	7.6	193	301	28
	D	274	8.7	205	337	29
	Na	258	6.7	230	286	16

CALL N8ii - Measurement Comparisons

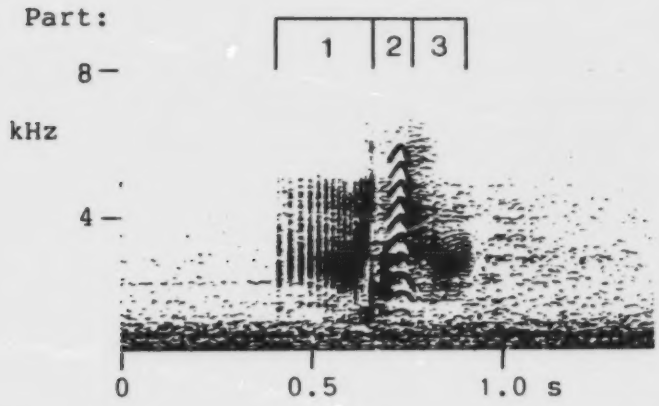
Measurement	C vs D	C vs Na	D vs Na
Duration (ms)	ns	<0.01	<0.05
Part 1:			
Dur (ms)	--	--	--
IPI, start (ms)	ns	ns	ns
Part 2:			
Dur (ms)	ns	ns	<0.001
SBI, start (Hz)	ns	<0.001	<0.05
SBI, mid (Hz)	ns	ns	ns
SBI, end (Hz)	<0.001	ns	ns

CALL N8iii



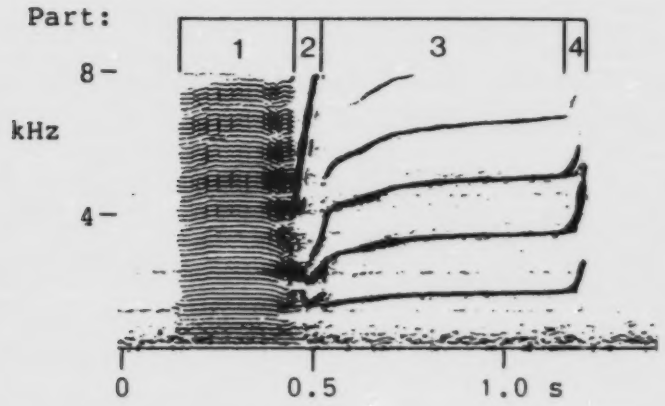
Measurement	Pod	Mean	C.V.	Min	Max	n	p
Duration (ms)	B	535	10.1	448	623	12	ns
	I1	544	8.9	509	626	6	
Part 1:							
Dur (ms)	B	323	19.1	240	437	12	ns
	I1	291	15.6	237	373	6	
IPI, start (ms)	B	28	11.5	24	35	11	<0.05
	I1	28	8.8	26	33	6	
Part 2:							
Dur (ms)	B	211	15.0	155	255	12	ns
	I1	252	10.1	226	291	6	
SBI, start (Hz)	B	752	20.8	468	962	12	ns
	I1	691	35.3	455	1009	5	
SBI, peak (Hz)	B	858	9.7	678	974	12	<0.01
	I1	979	5.4	910	1070	6	
SBI, end (Hz)	B	569	6.0	514	617	12	--
	I1	614	15.4	445	711	6	

CALL N8iv



Measurement	Pod	Mean	C.V.	Min	Max	n	p
Duration (ms)	B	558	15.3	436	773	15	ns
	I1	522	7.8	478	606	10	
Part 1:							
Dur (ms)	B	314	22.7	242	554	15	ns
	I1	292	6.2	269	324	10	
IPI, start (ms)	B	34	16.9	27	47	15	ns
	I1	26	15.6	21	31	10	
Part 2:							
Dur (ms)	B	244	17.3	185	346	15	ns
	I1	229	15.1	173	282	10	
SBI, start (Hz)	B	425	20.9	249	568	15	<0.01
	I1	371	15.3	324	489	10	
SBI, peak (Hz)	B	633	12.3	505	759	14	--
	I1	656	4.0	604	698	10	
SBI, end (Hz)	B	255	43.2	180	568	15	ns
	I1	281	34.6	145	470	10	
Part 3:							
Dur (ms)	B	116	35.5	12	156	15	ns
	I1	112	30.[illegible]	46	148	10	

CALLS N9i (A1 pod), N9ii (A4 pod) and N9iii (A5 pod)



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	1082	9.0	889	1269	27
	A4	984	14.6	675	1277	32
	A5	933	10.9	743	1135	32
Part 1:						
Dur (ms)	A1	333	19.4	189	490	27
	A4	288	19.9	187	428	32
	A5	334	23.3	216	511	32
SBI (Hz)	A1	144	12.4	120	181	27
	A4	197	17.0	132	260	32
	A5	148	16.3	104	192	32
Part 2:						
Dur (ms)	A1	71	25.4	39	104	27
	A4	85	25.3	51	131	32
	A5	71	16.7	47	101	32
SBI (Hz)	A1	656	17.7	467	931	27
	A4	652	9.5	500	785	32
	A5	617	9.7	457	728	32

continued...

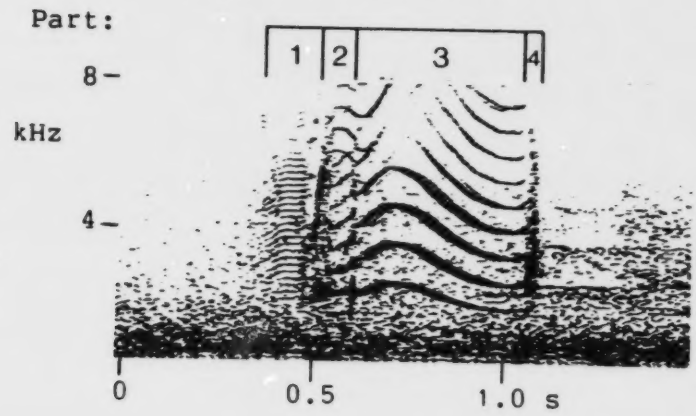
CALL N9 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 3:						
Dur (ms)	A1	644	13.4	477	835	27
	A4	501	20.4	314	705	32
	A5	434	8.8	366	525	32
Dur, downsweep at end (ms)	A1	----	----	----	----	--
	A4	46	38.5	13	77	31
	A5	----	----	----	----	--
SBI, start (Hz)	A1	1386	9.8	1130	1611	27
	A4	1577	6.0	1287	1848	32
	A5	1410	6.7	1128	1612	32
SBI, end (Hz)	A1	1695	13.2	1410	2152	27
	A4	3058	9.7	2418	3652	32
	A5	1730	7.1	1429	2014	32
Part 4:						
Dur (ms)	A1	34	32.7	5	55	27
	A4	108	19.1	70	144	32
	A5	94	15.0	58	120	32
SBI (Hz)	A1	----	----	----	----	--
	A4	781	14.2	518	1043	26
	A5	866	12.5	633	1069	30
^f, SB2, upsweep (Hz)	A1	905	47.4	497	2294	24
	A4	----	----	----	----	--
	A5	----	----	----	----	--

CALL N9 - Measurement Comparisons

Measurement	A1 vs A4	A1 vs A5	A4 vs A5
Duration (ms)	<0.01	<0.001	ns
Part 1:			
Dur (ms)	ns	ns	ns
SBI (Hz)	<0.001	ns	<0.001
Part 2:			
Dur (ms)	<0.01	ns	<0.01
SBI (Hz)	ns	ns	ns
Part 3:			
Dur (ms)	<0.001	<0.001	<0.01
SBI, start (Hz)	<0.001	ns	<0.001
SBI, end (Hz)	<0.001	ns	<0.001
Part 4:			
Dur (ms)	<0.001	<0.001	<0.01
SBI (Hz)	---	---	<0.01

CALL N10



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	857	12.3	638	1022	18
	A4	829	14.5	691	1012	8
	A5	853	7.0	706	967	27
Part 1:						
Dur (ms)	A1	215	24.0	131	282	13
	A4	175	23.8	130	233	10
	A5	160	24.4	105	242	19
SBI (Hz)	A1	117	14.0	84	136	18
	A4	143	22.5	100	203	10
	A5	131	27.2	76	215	23
Part 2:						
Dur (ms)	A1	201	60.8	65	449	18
	A4	146	43.7	84	254	10
	A5	133	40.2	51	294	27
SBI (Hz)	A1	603	11.5	469	730	17
	A4	607	16.2	481	745	10
	A5	565	11.9	433	729	23

continued...

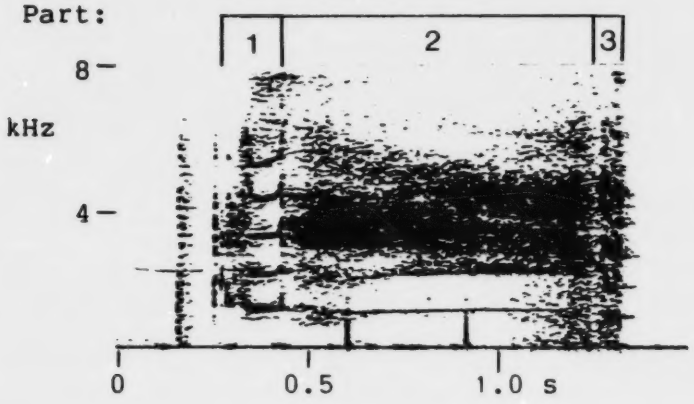
CALL N10 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 3:						
Dur (ms)	A1	478	15.5	342	654	18
	A4	518	15.6	376	603	10
	A5	507	10.4	431	635	27
SBI, start (Hz)	A1	913	14.5	451	1050	18
	A4	1005	11.1	876	1227	10
	A5	926	16.1	541	1226	27
SBI, peak (Hz)	A1	1036	8.6	737	1139	18
	A4	1114	4.8	1013	1164	10
	A5	1135	7.8	965	1281	27
SBI, end (Hz)	A1	796	13.6	576	1053	18
	A4	826	11.1	736	974	10
	A5	891	14.9	655	1171	27
Part 4:						
Dur (ms)	A1	40	30.2	26	62	10
	A4	43	36.3	22	63	10
	A5	99	57.6	22	209	27
SBI (Hz)	A1	593	23.9	273	766	11
	A4	592	18.5	468	745	10
	A5	643	13.6	466	847	27
Tone: f, start (Hz)	A1	3996	17.9	2849	5503	13
	A4	3721	9.0	3228	4139	9
	A5	4051	17.2	2533	5512	19

CALL N10 - Measurement Comparisons

Measurement	A1 vs A4	A1 vs A5	A4 vs A5
Duration (ms)	ns	ns	ns
Part 1:			
Dur (ms)	ns	<0.01	ns
SBI (Hz)	ns	ns	ns
Part 2:			
Dur (ms)	ns	<0.05	ns
SBI (Hz)	ns	ns	ns
Part 3:			
Dur (ms)	ns	ns	ns
SBI, start (Hz)	ns	ns	ns
SBI, peak (Hz)	ns	<0.01	ns
SBI, end (Hz)	ns	<0.05	ns
Part 4:			
Dur (ms)	ns	<0.01	<0.05
SBI (Hz)	ns	ns	ns
Tone: f, start (Hz)	ns	ns	ns

CALL N11i



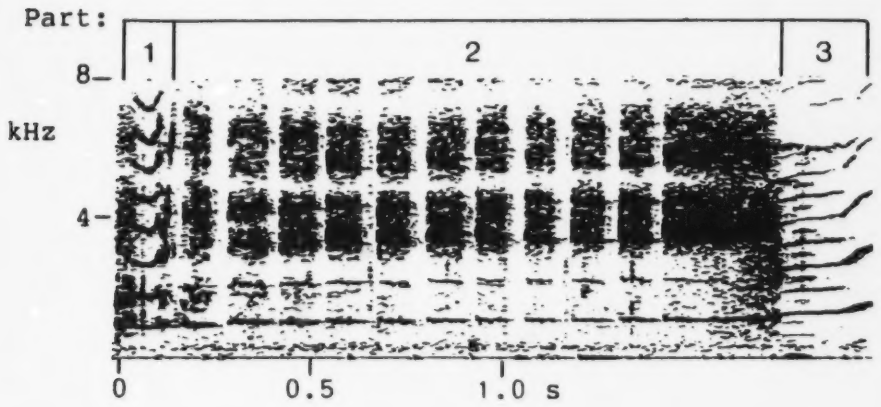
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	1389	22.7	987	1937	11
	A4	1501	26.7	948	2035	6
	A5	1428	34.4	832	2216	8
Part 1:						
Dur (ms)	A1	112	21.1	81	163	11
	A4	122	26.2	84	181	6
	A5	107	16.3	89	142	8
SBI (Hz)	A1	1073	14.3	727	1315	11
	A4	925	2.3	901	963	6
	A5	1100	11.7	917	1336	8
Part 2:						
Dur (ms)	A1	1078	22.8	653	1480	11
	A4	1097	32.4	652	1549	6
	A5	1129	43.1	511	1984	8
SBI (Hz)	A1	1027	8.2	840	1195	11
	A4	1061	1.9	1036	1088	6
	A5	1046	9.4	872	1177	7

continued...

CALL N11i - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 3:						
Dur (ms)	A1	68	27.5	44	112	11
	A4	92	30.8	58	124	6
	A5	69	30.7	45	108	8
SBI (Hz)	A1	815	11.0	686	971	11
	A4	863	12.5	668	951	6
	A5	919	15.0	731	1095	8

CALL N11ii



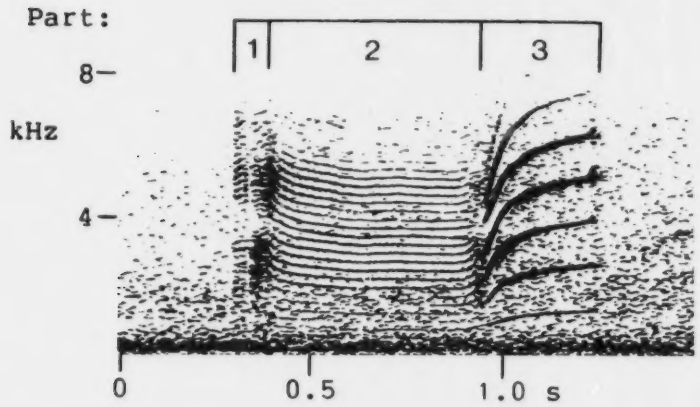
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	B	1384	----	----	----	1
	C	1582	16.5	1312	1849	4
	Na	1245	47.2	790	2091	4
Part 1:						
Dur (ms)	B	134	----	----	----	1
	C	189	43.6	146	313	4
	Na	125	5.8	117	134	4
SBI (Hz)	B	1129	----	----	----	1
	C	1083	13.9	865	1190	4
	Na	919	8.3	836	1019	4
Part 2:						
Dur (ms)	B	1187	----	----	----	1
	C	1312	16.9	1089	1600	4
	Na	996	51.8	567	1722	4
SBI (Hz)	B	1111	----	----	----	1
	C	1141	9.9	1007	1270	4
	Na	961	12.0	846	1121	4

continued...

CALL N11ii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Dur, pulses (ms)	B	106	9.1	92	119	5
	C	65	26.0	33	89	16
	Na	60	20.7	39	82	13
IPI (ms)	B	67	24.6	52	83	4
	C	86	14.4	65	105	20
	Na	99	37.9	42	228	17
Part 3:						
Dur (ms)	B	53	----	----	----	1
	C	80	21.8	63	103	4
	Na	124	68.8	67	252	4
SBI (Hz)	B	968	----	----	----	1
	C	929	7.2	861	1011	4
	Na	868	----	----	----	1

CALL N12



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	961	18.3	565	1369	26
	A4	847	13.9	432	1088	29
	A5	804	14.7	498	1101	27
	B	724	13.7	525	881	27
	C	757	18.0	517	1063	22
	D	744	19.0	450	1280	37
	H	683	15.5	552	1014	27
	I1	808	11.7	674	1049	16
	Na	735	8.0	615	831	15
Part 1:						
Dur (ms)	A1	122	18.5	78	193	25
	A4	115	33.1	77	206	29
	A5	167	17.7	129	248	27
	B	97	19.1	49	131	27
	C	93	22.6	57	149	22
	D	85	20.3	48	123	37
	H	120	17.2	78	158	27
	I1	124	20.0	61	161	16
	Na	65	7.9	61	79	15

continued...

CALL N12 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI (Hz)	A1	591	10.7	478	719	25
	A4	573	16.7	236	709	28
	A5	634	8.4	506	734	27
	B	470	14.4	350	589	27
	C	291	37.5	107	537	22
	D	287	29.4	157	467	25
	H	439	17.3	237	678	27
	I1	480	15.6	276	591	15
	Na	338	31.6	221	545	13
Part 2:						
Dur (ms)	A1	790	20.2	451	1130	26
	A4	671	25.0	230	953	29
	A5	483	20.9	233	684	27
	B	545	16.0	362	683	27
	C	428	31.1	179	615	22
	D	375	43.4	69	815	37
	H	365	26.6	267	662	27
	I1	537	13.8	441	713	16
	Na	536	12.1	449	654	15
SBI (Hz)	A1	236	14.2	176	310	26
	A4	298	11.4	217	339	27
	A5	308	13.6	229	404	27
	B	230	8.4	194	276	27
	C	261	10.7	215	326	22
	D	273	9.2	204	313	37
	H	225	13.5	167	275	27
	I1	219	10.5	179	255	16
	Na	244	11.3	195	285	15
Part 3:						
Dur (ms)	A1	55	52.0	33	160	25
	A4	43	35.3	22	85	27
	A5	154	21.7	115	264	27
	B	81	29.1	44	140	27
	C	235	50.1	90	491	22
	D	283	26.3	172	466	37
	H	197	14.8	149	256	27
	I1	146	21.4	106	196	16
	Na	133	40.5	94	260	15

continued...

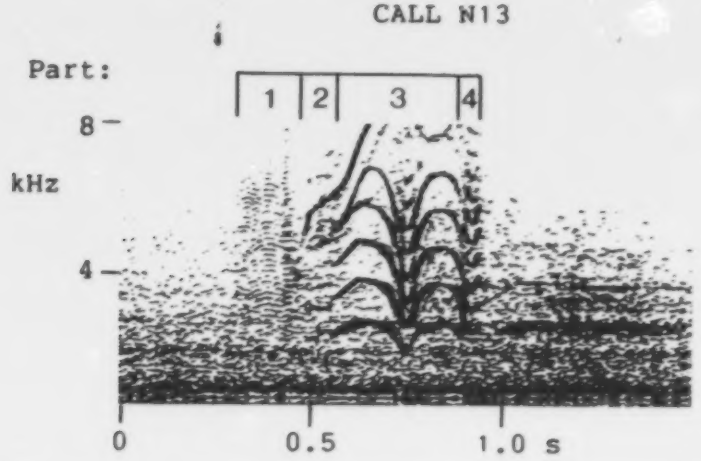
CALL N12 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, start (Hz)	A1	207	22.9	144	340	25
	A4	271	11.4	206	325	27
	A5	284	14.6	216	392	27
	B	389	34.3	168	731	27
	C	328	39.7	164	509	22
	D	242	17.1	180	343	37
	H	208	16.7	154	286	27
	I1	184	16.9	148	259	16
	Na	874	12.1	665	1009	15
SBI, end (Hz)	A1	194	46.3	96	402	25
	A4	245	36.1	85	470	28
	A5	698	15.0	498	1011	27
	B	1320	72.7	696	3618	27
	C	1333	11.6	1008	1676	22
	D	1329	4.1	1176	1414	37
	H	1088	10.1	943	1364	27
	I1	1035	26.2	607	1364	16
	Na	1362	10.1	1113	1669	15

CALL N12 - MEASUREMENT COMPARISONS

Comparison	Duration	Part 1		Part 2		Part 3	
		Dur	SBI	Dur	SBI	SBI start	SBI end
A1 vs A4	ns	ns	ns	ns	<0.001	ns	ns
A1 vs A5	<0.01	<0.01	ns	<0.001	<0.001	ns	<0.01
A1 vs B	<0.001	ns	<0.001	<0.001	ns	<0.001	<0.001
A1 vs C	<0.001	ns	<0.001	<0.001	ns	<0.001	<0.001
A1 vs D	<0.001	<0.05	<0.001	<0.001	<0.01	ns	<0.001
A1 vs H	<0.001	ns	<0.001	<0.001	ns	ns	<0.001
A1 vs I1	ns	ns	<0.05	<0.001	ns	ns	<0.001
A4 vs A5	ns	<0.001	ns	<0.001	ns	ns	<0.05
A4 vs B	ns	ns	<0.01	ns	<0.001	<0.001	<0.001
A4 vs C	ns	ns	<0.001	<0.001	<0.05	ns	<0.001
A4 vs D	ns	ns	<0.001	<0.001	ns	ns	<0.001
A4 vs H	<0.01	ns	<0.001	<0.001	<0.001	ns	<0.001
A4 vs I1	ns	ns	ns	ns	<0.001	<0.05	<0.001
A5 vs B	ns	<0.001	<0.001	ns	<0.001	<0.001	<0.001
A5 vs C	ns	<0.001	<0.001	<0.001	<0.001	ns	<0.001
A5 vs D	ns	<0.001	<0.001	ns	<0.01	ns	<0.001
A5 vs H	ns	<0.01	<0.001	ns	<0.001	<0.05	<0.05
A5 vs I1	ns	<0.05	<0.001	ns	<0.001	<0.01	ns
B vs C	ns	ns	<0.001	ns	ns	ns	ns
B vs D	ns	ns	<0.001	<0.001	<0.001	<0.001	ns
B vs H	ns	ns	ns	<0.01	ns	<0.001	ns
B vs I1	ns	ns	ns	ns	ns	<0.001	ns
C vs D	ns	ns	ns	ns	ns	<0.01	ns
C vs H	ns	ns	<0.001	ns	<0.05	<0.001	ns
C vs I1	ns	ns	<0.001	ns	<0.05	<0.001	ns
D vs H	ns	<0.05	<0.001	ns	<0.001	ns	ns
D vs I1	ns	<0.05	<0.001	<0.05	<0.001	ns	ns
H vs I1	ns	ns	ns	<0.05	ns	ns	ns

CALL N13



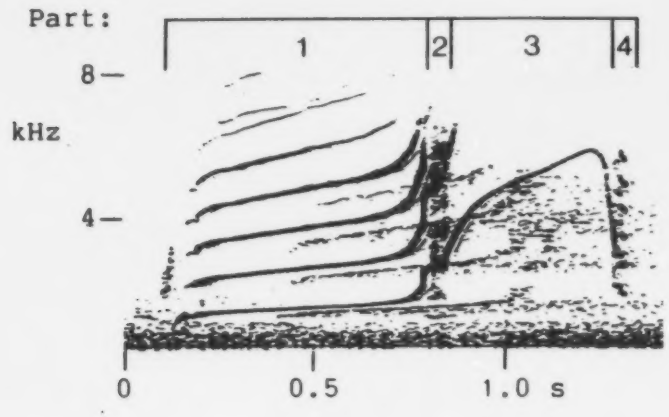
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A4	523	17.0	426	600	3
	A5	666	7.5	562	745	20
Part 1:						
Dur (ms)	A4	133	1.1	132	134	2
	A5	147	34.9	55	261	17
SBI (Hz)	A4	186	31.9	144	228	2
	A5	142	16.6	96	183	16
Part 2:						
Dur (ms)	A4	80	52.6	41	125	3
	A5	87	32.9	48	146	20
SBI (Hz)	A4	673	9.2	629	717	2
	A5	519	22.1	312	756	18

continued...

CALL N13 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 3:						
Dur (ms)	A4	276	17.8	236	331	3
	A5	384	16.0	296	551	20
SBI, start (Hz)	A4	1073	35.0	665	1405	3
	A5	763	32.1	401	1289	20
SBI, 1st peak (Hz)	A4	1716	47.6	1098	2643	3
	A5	1194	9.8	1091	1637	20
SBI, dip (Hz)	A4	775	55.0	486	1265	3
	A5	742	13.2	586	927	20
SBI, 2nd peak (Hz)	A4	1001	46.9	694	1542	3
	A5	1165	6.5	1047	1304	20
SBI, end (Hz)	A4	1321	87.9	536	2655	3
	A5	926	18.7	430	1175	20
Part 4:						
Dur (ms)	A4	49	32.8	40	68	3
	A5	45	28.8	23	70	19
SBI (Hz)	A4	847	72.2	346	1529	3
	A5	675	16.5	456	893	19
Tone: f, start (Hz)	A4	3463	7.1	3289	3637	2
	A5	4783	14.8	3343	6234	17

CALL N16i



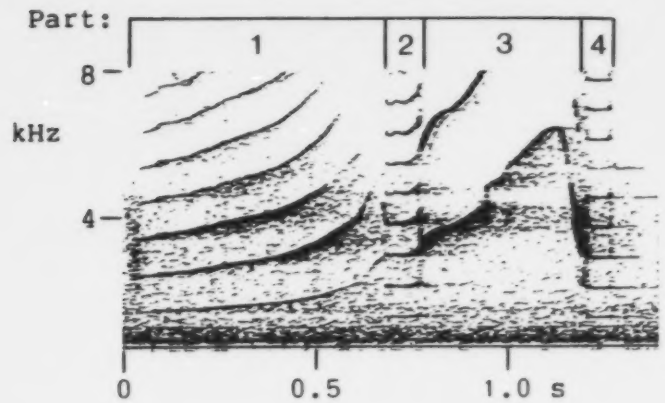
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	B	1301	13.3	791	1495	28
Part 1:						
Dur (ms)	B	745	20.8	397	940	28
SBI, start (Hz)	B	1047	7.4	891	1166	28
SBI, end (Hz)	B	2011	13.7	1352	2386	28
^f, SB2 (Hz)	B	2297	23.0	1385	3155	28
Part 2:						
Dur (ms)	B	43	34.2	22	81	28
SBI (Hz)	B	746	21.5	505	916	10

continued...

CALL N16i - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 3:						
Dur (ms)	B	445	14.0	262	564	28
SBI, start (Hz)	B	2859	10.7	2174	3822	27
f, peak (Hz)	B	6176	8.9	4436	7300	27
f, end (Hz)	B	4001	11.5	3182	4788	28
Part 4:						
Dur (ms)	B	27	20.1	17	42	26
SBI (Hz)	B	789	11.3	601	908	26
Tone: f, start (Hz)	B	2243	12.1	1881	2966	23

CALL N16ii



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	C	1285	24.6	842	2250	50
	D	1228	27.0	564	1778	25
	Na	1114	17.3	785	1695	26
Part 1:						
Dur (ms)	C	708	34.1	326	1506	50
	D	661	29.3	298	977	25
	Na	557	28.3	305	983	26
SBI, start (Hz)	C	1021	10.7	789	1233	50
	D	1100	14.9	691	1470	25
	Na	1008	14.8	759	1410	26
SBI, end (Hz)	C	1977	36.5	1233	4136	50
	D	1832	27.4	1327	3049	25
	Na	1406	14.4	1186	1895	26
^f, SB2 (Hz)	C	1770	73.9	398	5809	50
	D	1352	57.3	209	2855	25
	Na	880	52.6	277	2022	26
Dur, gap between Pts. 1 and 2 (ms)	C	79	34.3	39	136	20
	D	88	30.8	45	135	13
	Na	71	32.1	28	107	8

continued...

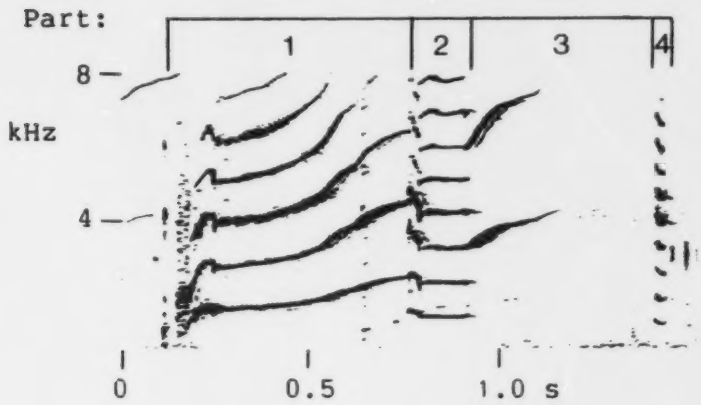
CALL N16ii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 2:						
Dur (ms)	C	63	22.8	39	101	50
	D	68	23.9	42	120	25
	Na	75	19.5	37	96	26
SBI (Hz)	C	809	11.3	649	966	50
	D	828	10.5	670	1029	24
	Na	743	14.0	597	949	25
Part 3:						
Dur (ms)	C	409	19.5	219	569	50
	D	382	26.4	152	567	25
	Na	347	16.1	258	496	26
SBI, start (Hz)	C	2757	10.0	2033	3328	50
	D	2889	11.7	2283	3535	25
	Na	2999	8.9	2422	3621	25
f, peak (Hz)	C	6735	9.7	5275	8490	50
	D	7282	9.9	5794	8821	25
	Na	6438	5.3	5590	7125	26
f, SB2, end (Hz)	C	2899	11.3	1919	3653	50
	D	3048	12.0	2427	3962	25
	Na	2799	8.5	2405	3368	26
Part 4:						
Dur (ms)	C	61	18.9	40	90	50
	D	65	27.6	41	113	25
	Na	96	18.8	46	136	26
SBI (Hz)	C	871	7.2	727	1038	50
	D	904	13.2	701	1191	25
	Na	767	13.1	592	993	25
Tone: f, start (Hz)	C	2723	20.1	1716	4270	36
	D	3581	17.6	2250	5066	22
	Na	3003	17.6	2035	3951	26

CALL N16ii - Measurement Comparisons

Measurement	C vs D	C vs Na	D vs Na
Duration (ms)	ns	ns	ns
Part 1:			
Dur (ms)	ns	<0.05	ns
SBI, start (Hz)	ns	ns	ns
SBI, end (Hz)	ns	<0.001	<0.05
^f, SB2 (Hz)	ns	<0.01	ns
Dur, gap (ms)	ns	--	--
Part 2:			
Dur (ms)	ns	<0.01	ns
SBI (Hz)	ns	<0.05	<0.01
Part 3:			
Dur (ms)	ns	<0.01	ns
SBI, start (Hz)	ns	<0.01	ns
f, peak (Hz)	<0.01	ns	<0.001
f, SB2, end (Hz)	ns	ns	<0.05

CALL N16iii



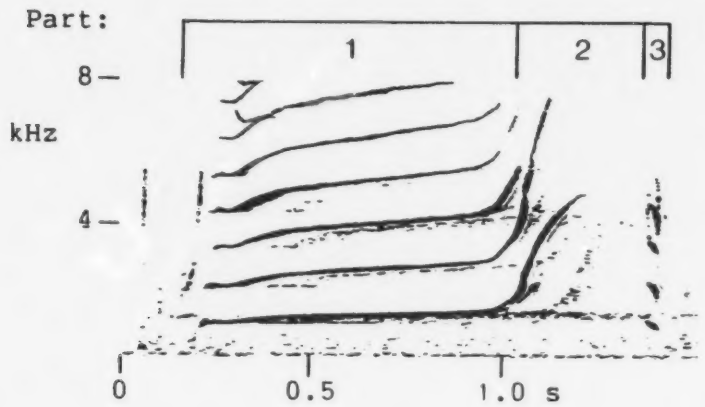
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	H	1392	10.8	963	1624	15
	I1	1302	7.5	1233	1372	2
Part 1:						
Dur (ms)	H	805	19.5	398	1019	15
	I1	714	3.1	699	730	2
SBI, start (Hz)	H	1108	20.7	458	1392	15
	I1	925	13.5	837	1014	2
SBI, end (Hz)	H	2068	7.2	1746	2311	15
	I1	1950	2.7	1913	1988	2
^f, SB2 (Hz)	H	2210	18.1	1569	3287	15
	I1	2199	1.7	2172	2226	2

continued...

CALL N16iii - continued...

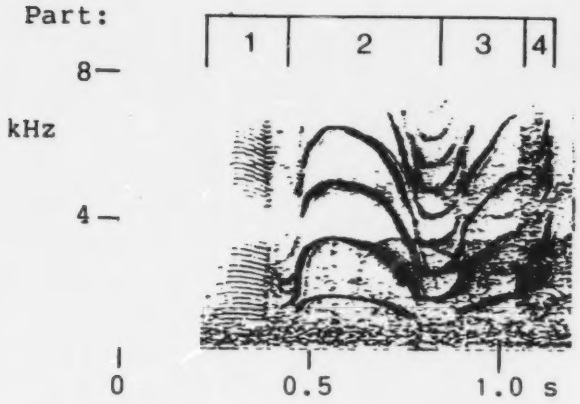
Measurement	Pod	Mean	C.V.	Min	Max	n
Part 2:						
Dur (ms)	H	111	11.0	93	137	15
	I1	76	39.1	55	97	2
SBI (Hz)	H	949	3.7	864	990	15
	I1	932	3.8	907	957	2
Part 3:						
Dur (ms)	H	430	10.0	384	521	15
	I1	459	9.7	428	491	2
SBI, start (Hz)	H	3008	6.3	2824	3419	15
	I1	2904	7.3	2754	3054	2
f, peak (Hz)	H	3943	8.6	3285	4768	15
	I1	4036	3.6	3933	4139	2
Part 4:						
Dur (ms)	H	22	16.8	16	30	15
	I1	24	11.8	22	26	2
SBI (Hz)	H	664	10.3	477	748	15
	I1	651	6.3	622	680	2
Tone: f, start (Hz)	H	3021	12.2	2391	3484	6
	I1	2001	----	----	----	1

CALL N16iv



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	I1	1273	10.3	1024	1534	26
Part 1:						
Dur (ms)	I1	749	15.0	599	1003	26
SBI, start (Hz)	I1	1009	7.0	841	1120	26
SBI, end (Hz)	I1	1600	10.2	1329	1935	26
^f, SB2 (Hz)	I1	1213	28.0	705	2122	26
Part 2:						
Dur (ms)	I1	493	13.8	384	631	26
SBI, start (Hz)	I1	1600	10.2	1329	1935	26
f, peak (Hz)	I1	4493	6.9	3823	4994	25
f, end (Hz)	I1	3136	13.8	2831	3441	2
Part 3:						
Dur (ms)	I1	30	30.2	20	54	26
SBI (Hz)	I1	795	18.7	548	1095	26
Tone: f, start (Hz)	I1	2210	14.0	1587	2990	21

CALL N17



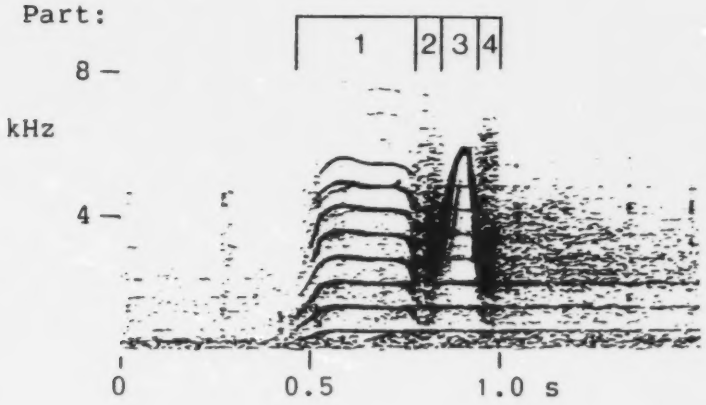
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A5	843	8.4	700	966	19
Part 1:						
Dur (ms)	A5	116	64.7	15	219	18
SBI (Hz)	A5	163	14.5	108	201	11
Part 2:						
Dur (ms)	A5	441	15.0	297	583	19
SBI, start (Hz)	A5	619	12.5	513	750	19
SBI, peak (Hz)	A5	1516	8.0	1293	1805	19
SBI, end (Hz)	A5	841	16.3	575	1066	19
Part 3:						
Dur (ms)	A5	226	21.5	141	328	19
SBI, peak (Hz)	A5	2037	25.9	1354	2985	19
SBI, end (Hz)	A5	1987	19.5	1556	2678	6

continued...

CALL N17 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 4:						
Dur (ms)	A5	60	41.7	31	81	19
SBI, end (Hz)	A5	988	18.2	668	1310	19
Tone: f, start (Hz)	A5	3869	5.9	3401	4121	10

CALL N18



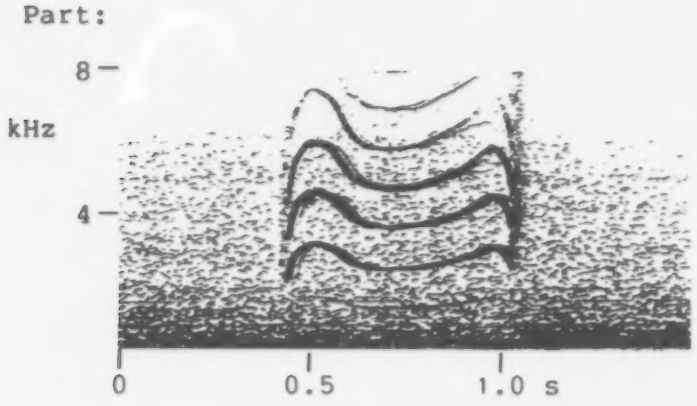
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	B	678	29.2	363	1145	22
	C	765	45.2	382	1053	3
Part 1:						
Dur (ms)	B	400	42.2	184	826	25
	C	463	61.0	152	704	3
SBI, start (Hz)	B	495	20.2	272	713	25
	C	522	42.2	384	776	3

continued...

CALL N18 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, end (Hz)	B	568	19.3	372	737	25
	C	570	24.0	436	710	3
Part 2:						
Dur (ms)	B	38	23.8	23	54	25
	C	45	18.5	40	55	3
SBI (Hz)	B	356	16.6	290	503	18
	C	475	7.0	452	499	2
Part 3:						
Dur (ms)	B	177	18.5	122	249	25
	C	213	26.0	152	260	3
f, start (Hz)	B	2489	15.0	1298	2946	25
	C	2550	24.4	2142	3268	3
f, peak (Hz)	B	5597	9.1	4682	6619	25
	C	5840	10.0	5261	6427	3
f, end (Hz)	B	2801	20.2	1728	3910	25
	C	3042	9.4	2716	3250	3
Part 4:						
Dur (ms)	B	41	33.1	19	68	22
	C	42	14.4	37	49	3
SBI (Hz)	B	361	19.5	263	555	22
	C	642	16.5	538	750	3
Tone: f, start (Hz)	B	2288	25.7	1383	4497	20
	C	----	----	----	----	--

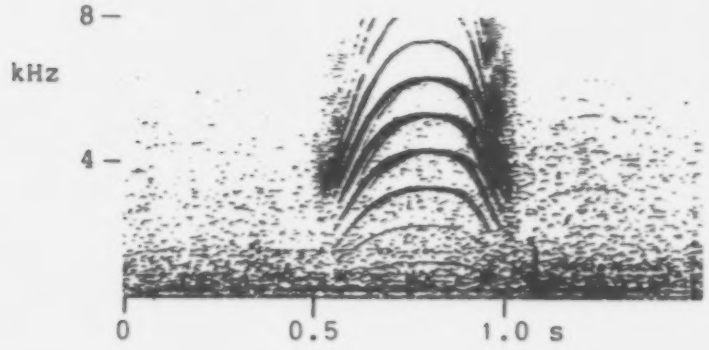
CALL N19



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A4	545	14.0	409	661	23
SBI, start (Hz)	A4	1152	17.5	738	1597	23
SBI, 1st peak (Hz)	A4	1566	3.4	1411	1652	23
SBI, dip (Hz)	A4	1335	4.6	1137	1434	23
SBI, 2nd peak (Hz)	A4	1753	11.5	1540	2571	23
SBI, end (Hz)	A4	1470	13.0	1106	1814	23

CALL N20

Part:

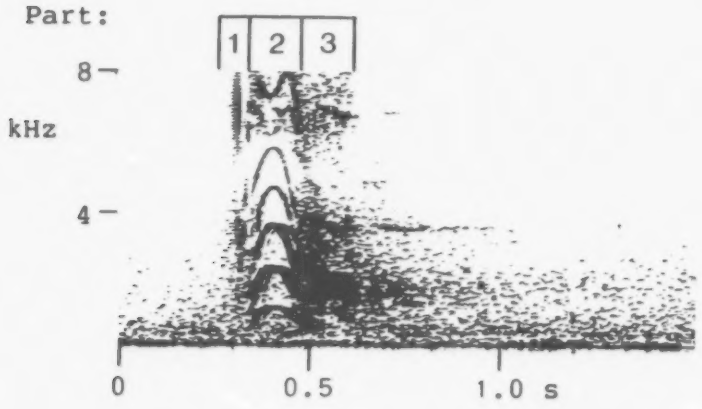


Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	B	679	19.4	371	892	30
	C	511	22.5	324	715	16
	D	535	20.6	368	757	29
	I1	649	12.4	592	706	2
Time to peak (ms)	B	451	26.2	238	709	30
	C	328	25.4	203	478	16
	D	320	27.2	206	515	29
	I1	436	9.1	408	464	2
SBI, start (Hz)	B	210	18.5	133	314	30
	C	246	27.9	164	440	16
	D	268	45.4	128	679	29
	I1	262	12.1	240	285	2
SBI, peak (Hz)	B	464	20.3	216	693	30
	C	781	35.0	404	1242	16
	D	928	25.1	409	1287	29
	I1	484	22.5	407	561	2
SBI, end (Hz)	B	217	40.4	73	367	30
	C	383	49.6	160	791	16
	D	402	36.2	172	860	29
	I1	296	18.8	257	336	2

CALL N20 - Measurement Comparisons

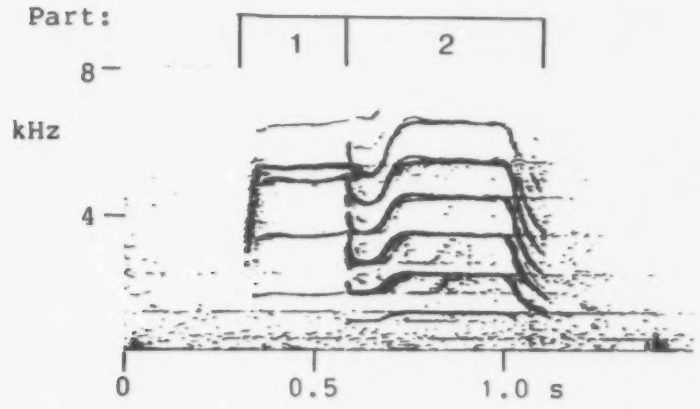
Measurement	B vs C	B vs D	C vs D
Duration (ms)	<0.001	<0.001	ns
Time to PRL (ms)	<0.01	<0.001	ns
SBI, start (Hz)	ns	ns	ns
SBI, peak (Hz)	<0.001	<0.001	ns
SBI, end (Hz)	<0.01	<0.001	ns

CALL N21



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	B	381	10.8	302	444	20
Part 1:						
Dur (ms)	B	125	23.2	49	181	20
Part 2:						
Dur (ms)	B	54	14.5	42	74	20
SBI, peak (Hz)	B	795	23.0	367	1015	20
Part 3:						
Dur (ms)	B	201	13.8	145	256	20
Tone: f, start (Hz)	B	3442	11.6	2330	3922	20

CALL N23i



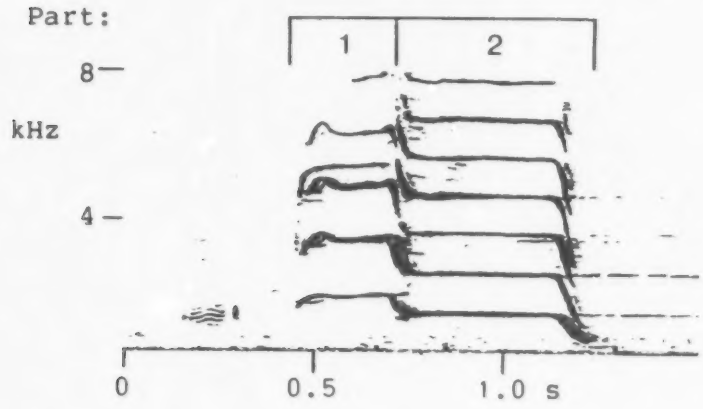
Measurement	Pod	Mean	C.V.	Min	Max	n	p
Duration (ms)	I11	908	8.2	782	1045	29	<0.001
	I31	819	7.2	743	957	26	
Part 1:							
Dur (ms)	I11	397	18.3	298	557	29	ns
	I31	372	17.7	266	478	26	
SBI, start (Hz)	I11	1476	9.5	1185	1665	28	ns
	I31	1476	7.7	1191	1648	25	
SBI, mid (Hz)	I11	1771	7.9	1452	1949	29	ns
	I31	1785	8.6	1510	1994	26	
Part 2:							
Dur (ms)	I11	510	14.3	375	640	29	<0.001
	I31	447	11.6	358	545	26	
Dur, downsweep at end (ms)	I11	128	30.7	64	196	29	<0.001
	I31	97	25.4	49	147	26	
SBI, start (Hz)	I11	847	9.2	748	1056	29	ns
	I31	844	11.4	695	1096	26	
SBI, peak (Hz)	I11	1247	9.9	1042	1482	29	ns
	I31	1258	12.8	1066	1592	26	

continued...

CALL N23i - continued...

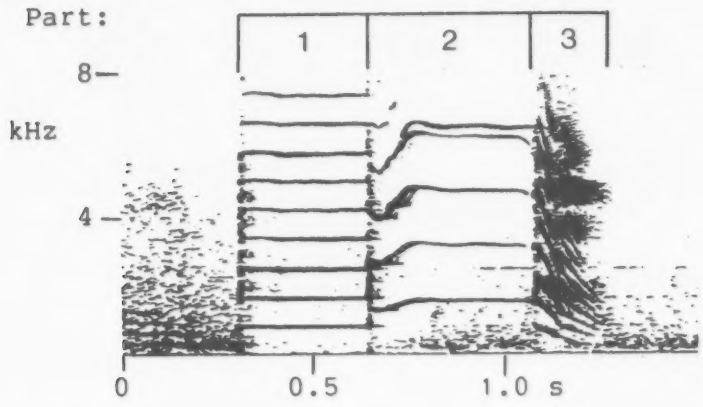
Measurement	Pod	Mean	C.V.	Min	Max	n	p
SBI, end (Hz)	I11	390	26.5	242	656	29	<0.01
	I31	477	20.5	323	788	26	
Tone: f, start (Hz)	I11	5328	4.0	4845	5682	29	ns
	I31	5334	3.8	5044	5633	26	

CALL N23ii



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (Hz)	G	802	15.9	438	1053	33
Part 1:						
Dur (ms)	G	349	23.0	237	528	33
SBI, start (Hz)	G	1452	6.9	1171	1609	33
SBI, mid (Hz)	G	1562	5.2	1447	1828	33
Part 2:						
Dur (ms)	G	452	20.6	154	639	33
Dur, downsweep at end (ms)	G	59	33.5	10	104	33
SBI, start (Hz)	G	1058	7.1	833	1208	33
SBI, peak (Hz)	G	1050	6.6	879	1190	33
SBI, end (Hz)	G	726	26.1	306	1121	33
Tone: f, start (Hz)	G	5147	2.8	4939	5526	33

CALL N24



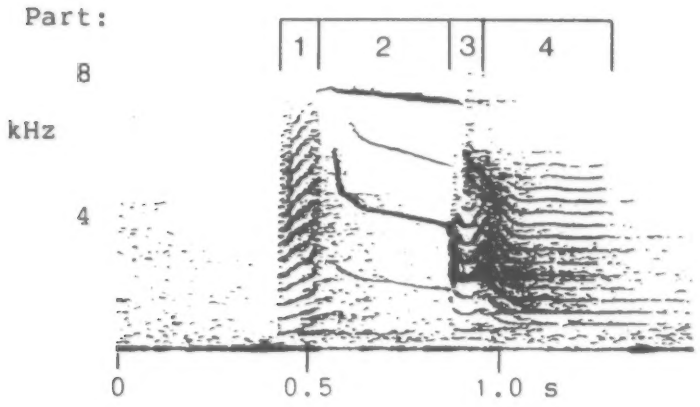
Measurement	Pod	Mean	C.V.	Min	Max	n	p
Duration (ms)	I11	950	18.1	621	1399	21	ns
	I31	938	19.7	641	1313	10	
Part 1:							
Dur (ms)	I11	339	37.5	115	707	21	ns
	I31	365	21.9	223	483	10	
SBI (Hz)	I11	828	7.3	709	1004	21	ns
	I31	791	5.0	711	863	10	
Part 2:							
Dur (ms)	I11	441	26.0	155	584	21	ns
	I31	470	17.5	365	663	10	
SBI, start (Hz)	I11	1238	18.1	947	1762	20	<0.01
	I31	1514	14.1	1243	1916	10	
SBI, peak (Hz)	I11	1579	9.4	1356	1906	21	<0.05
	I31	1465	8.2	1354	1762	10	

continued...

CALL N24 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n	p
Part 3:							
Dur (ms)	I11	156	37.6	75	300	21	<0.05
	I31	98	36.3	50	309	10	
SBI, start (Hz)	I11	792	30.6	454	1176	21	ns
	I31	506	43.6	202	1047	10	
SBI, end (Hz)	I11	378	46.9	191	786	21	<0.01
	I31	228	44.9	132	495	10	
Tone: f, start (Hz)	I11	6691	7.5	6223	7990	20	<0.01
	I31	6187	2.0	5977	6362	9	

CALL N25



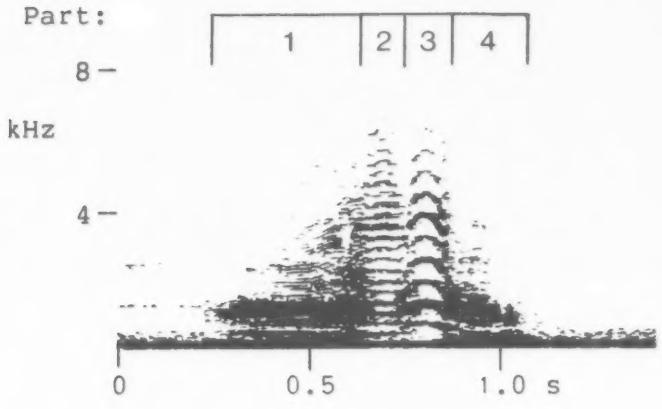
Measurement	Pod	Mean	C.V.	Min	Max	n	p
Duration (ms)	G	932	11.8	782	1230	28	<0.001
	I11	1123	17.8	682	1667	32	
Part 1:							
Dur (ms)	G	122	12.5	98	160	28	<0.001
	I11	95	18.4	61	147	32	
SBI (Hz)	G	725	11.3	561	866	28	<0.001
	I11	555	22.7	239	833	32	
Part 2:							
Dur (ms)	G	518	19.6	381	749	28	<0.001
	I11	324	41.6	94	513	32	
SBI, start (Hz)	G	2017	10.5	1719	2519	28	<0.001
	I11	2340	13.5	1708	3001	32	
SBI, end (Hz)	G	1774	8.6	1485	2172	28	ns
	I11	1815	14.6	1278	2332	32	

continued...

CALL N25 - continued...

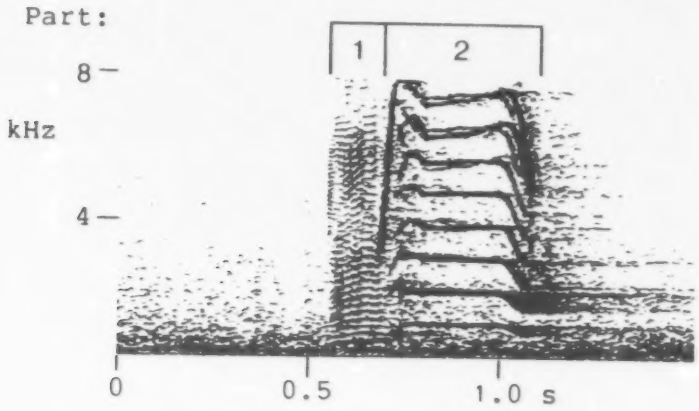
Measurement	Pod	Mean	C.V.	Min	Max	n	p
Part 3:							
Dur (ms)	G	111	19.6	78	158	28	<0.001
	I11	66	41.1	15	124	32	
SBI (Hz)	G	682	21.1	431	1012	28	ns
	I11	721	46.1	373	1321	32	
Part 4:							
Dur (ms)	G	185	26.5	115	335	26	<0.001
	I11	637	48.4	222	1205	32	
SBI, start (Hz)	G	701	23.6	470	1083	28	ns
	I11	795	42.5	384	1295	32	
SBI, peak (Hz)	G	1120	20.7	639	1486	28	ns
	I11	1066	44.3	486	1755	32	
SBI, end (Hz)	G	377	32.6	251	875	26	ns
	I11	352	15.8	252	466	32	
Tone: f, start (Hz)	G	7600	3.1	7342	7918	6	ns
	I11	7416	4.7	6890	7994	20	

CALL N26



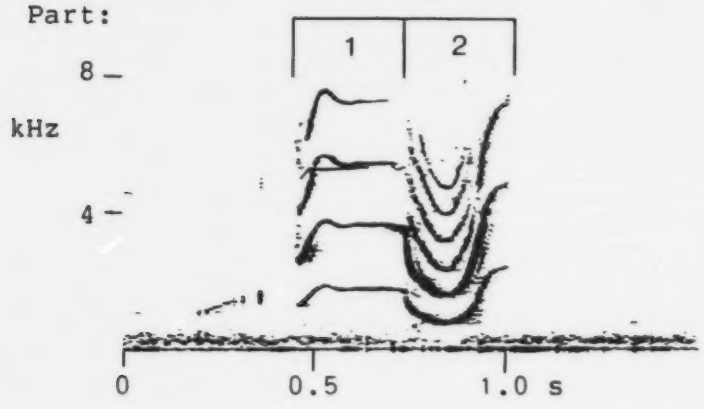
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	I11	788	10.9	627	884	10
Part 1:						
Dur (ms)	I11	194	23.5	93	264	10
SBI (Hz)	I11	107	9.4	96	120	10
Part 2:						
Dur (ms)	I11	148	16.1	103	176	10
SBI (Hz)	I11	447	18.9	348	595	10
Part 3:						
Dur (ms)	I11	97	24.9	66	129	10
SBI (Hz)	I11	1767	11.0	1450	2019	9
Part 4:						
Dur (ms)	I11	349	18.6	202	420	10
IPI, start (ms)	I11	25	17.4	19	33	10
IPI, end (ms)	I11	83	10.9	66	97	10

CALL N27



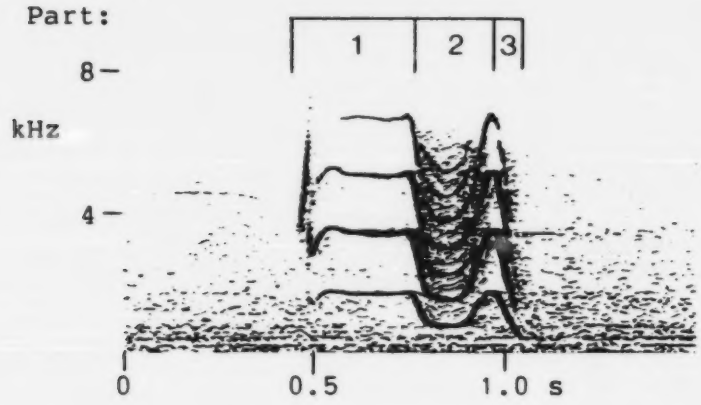
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	498	17.8	365	663	13
Part 1:						
Dur (ms)	A1	191	13.4	140	242	13
SBI (Hz)	A1	183	24.1	96	238	12
Part 2:						
Dur (ms)	A1	306	29.8	161	421	13
SBI, start (Hz)	A1	865	8.8	681	950	13
SBI, mid (Hz)	A1	928	7.6	832	1055	13
SBI, end (Hz)	A1	611	16.8	413	750	13
Tone: f, start (Hz)	A1	3217	16.0	2511	4366	12

CALL N28



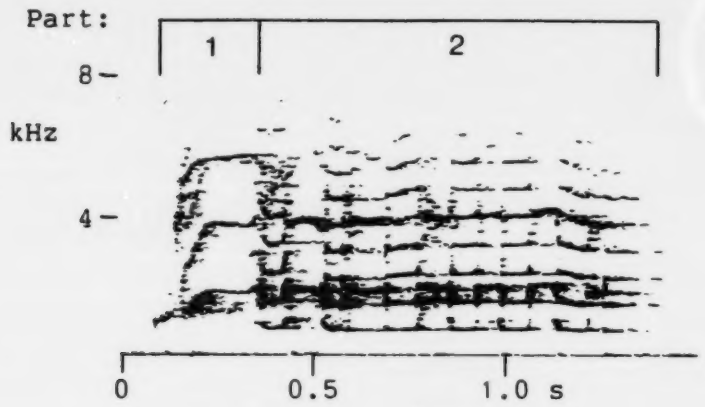
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	G	587	15.6	442	737	22
Part 1:						
Dur (ms)	G	315	25.3	184	460	22
SBI, start (Hz)	G	1380	12.3	1149	1795	22
SBI, mid (Hz)	G	1659	7.9	1341	1875	22
Part 2:						
Dur (ms)	G	405	14.3	324	516	22
SBI, start (Hz)	G	1704	6.4	1477	1894	22
SBI, dip (Hz)	G	746	6.2	662	843	22
SBI, end (Hz)	G	2001	14.9	1490	2621	22
Tone: f, start (Hz)	G	5237	4.5	4894	5742	22

CALL N29



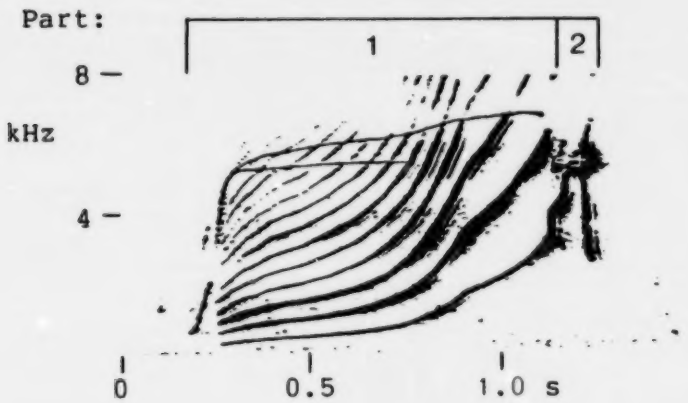
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	G	637	13.2	485	773	31
Part 1:						
Dur (ms)	G	362	24.0	211	533	31
SBI, start (Hz)	G	1423	15.1	849	1811	31
SBI, mid (Hz)	G	1711	8.6	1449	1972	31
Part 2:						
Dur (ms)	G	201	11.2	139	235	31
SBI, start (Hz)	G	1681	15.4	809	2032	31
SBI, dip (Hz)	G	728	11.3	552	895	28
SBI, end (Hz)	G	1696	25.4	723	2821	30
Part 3:						
Dur (ms)	G	76	22.8	53	133	30
SBI, end (Hz)	G	691	32.3	334	1379	31
Tone: f, start (Hz)	G	5316	3.8	4915	5741	25

CALL N30



Measurement	Pod	Mean	C.V.	Min	Max	n	
Duration (ms)	I11	1074	18.8	841	1566	12	ns
	I31	1130	20.5	699	1574	10	
Part 1:							
Dur (ms)	I11	289	33.3	184	532	12	<0.05
	I31	425	43.3	103	648	10	
Part 2:							
Dur (ms)	I11	785	19.7	505	1034	12	ns
	I31	705	14.4	585	931	10	
Dur, lo parts (ms)	I11	78	19.4	38	106	36	<0.05
	I31	66	24.2	32	107	30	
Dur, hi parts (ms)	I11	81	21.5	43	115	36	ns
	I31	92	14.0	29	73	29	
f, lo parts (Hz)	I11	728	13.7	513	945	36	<0.001
	I31	1566	11.0	1198	1983	30	
f, hi parts (Hz)	I11	2015	11.5	1417	2554	36	<0.05
	I31	2718	29.1	1901	4578	29	

CALL N32i



Measurement	Pod	Mean	C.V.	Min	Max	n	p
Duration (ms)	R	1206	13.6	853	1449	15	<0.05*
	W	1045	17.8	620	1330	19	
	64	936	12.4	801	1146	8	
	73	1018	6.2	933	1082	5	
Part 1:							
Dur (ms)	R	1094	15.4	695	1321	15	<0.01
	W	921	18.3	553	1187	19	
	64	897	10.2	781	1066	8	
	73	970	3.8	933	1030	5	
SBI, start (Hz)	R	391	16.5	266	502	15	ns
	W	352	13.1	263	428	19	
	64	400	16.6	310	483	8	
	73	289	16.4	235	339	5	
SBI, mid (Hz)	R	1132	31.4	583	1756	15	ns
	W	1190	25.0	753	1917	19	
	64	920	15.3	707	1108	8	
	73	1110	40.5	654	1669	5	
SBI, end (Hz)	R	2925	8.2	2482	3414	15	ns
	W	2960	11.0	2339	3640	19	
	64	2661	14.9	1912	2987	8	
	73	2761	13.7	2350	3192	5	

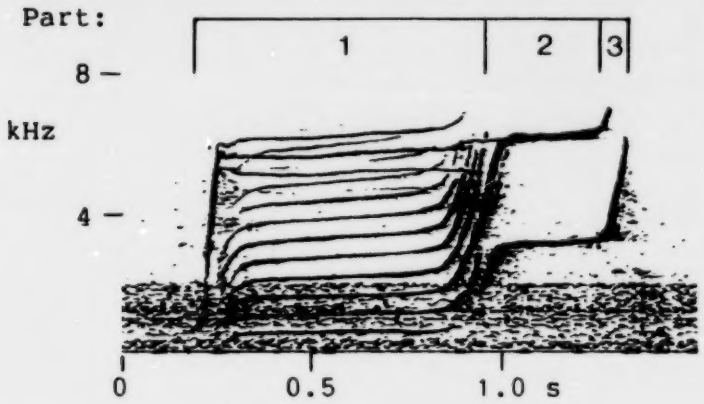
continued...

CALL N32i - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n	p
Part 2:							
Dur (ms)	R	111	35.1	42	158	15	ns
	W	123	36.7	51	229	19	
	64	96	28.3	80	128	3	
	73	120	5.9	115	125	2	
f, SB1, peak (Hz)	R	5811	11.5	4635	6699	15	<0.01
	W	5169	9.0	4439	6035	19	
	64	4521	7.5	4064	4785	4	
	73	5383	10.2	4995	5771	2	
f, SB1, end (Hz)	R	3072	13.8	2456	3808	10	ns
	W	2913	10.4	2441	3571	18	
	64	2930	1.3	2904	2957	2	
	73	2259	----	----	----	1	
Tone:							
f, start (Hz)	R	1769	36.8	607	3010	12	ns
	W	2285	31.4	879	3341	18	
	64	3005	32.4	1700	4644	8	
	73	1072	48.3	686	1959	5	
f, end (Hz)	R	6939	9.3	5682	7549	10	ns
	W	6397	11.6	5427	7979	19	
	64	6347	3.4	6097	6778	8	
	73	5066	6.6	4715	5500	4	

* ANOVA comparisons between R and W pods only.

CALL N32ii



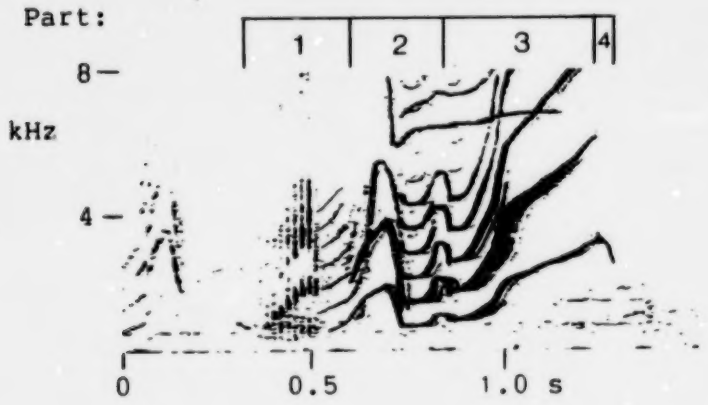
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	R	1353	20.4	958	1856	18
	73	1103	11.7	989	1243	3
Part 1:						
Dur (ms)	R	902	25.4	539	1266	18
	73	512	23.9	387	632	3
SBI, start (Hz)	R	470	14.0	389	620	18
	73	388	6.6	368	417	3
SBI, mid (Hz)	R	557	13.0	352	679	18
	73	891	8.8	801	938	3
Part 2:						
Dur (ms)	R	376	15.6	303	500	18
	73	496	6.6	464	530	3
SBI, end (Hz)	R	3201	4.1	2870	3396	18
	73	3314	5.8	2850	3661	3

continued...

CALL N32ii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 3:						
Dur (ms)	R	78	32.0	36	139	17
	73	95	23.2	73	116	3
f, SB1, end (Hz)	R	5862	8.7	4897	6661	18
	73	5583	2.5	5479	5739	3
Tone:						
f, start (Hz)	R	1936	41.5	818	3394	11
	73	857	1.6	848	867	2
f, level (Hz)	R	5993	7.6	5382	6914	17
	73	5718	3.6	5571	5865	2
f, end (Hz)	R	6382	4.0	5872	6768	15
	W	6219	----	----	----	--

CALL N33



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	R	949	10.5	750	1154	22
	W	889	10.1	717	1039	14
	64	923	13.0	742	1108	20
	73	1063	13.5	755	1273	11
Part 1:						
Dur (ms)	R	178	27.4	90	282	22
	W	190	39.2	85	370	14
	64	179	22.8	128	286	20
	73	226	27.1	103	317	11
IPI (ms)	R	21	17.4	15	28	20
	W	21	12.8	16	25	14
	64	20	15.8	15	27	20
	73	20	15.0	16	28	11
Part 2:						
Dur (ms)	R	204	8.9	159	243	22
	W	230	11.2	179	272	14
	64	252	16.1	171	337	20
	73	297	13.1	231	372	11

continued...

CALL N33 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Dur, 1st hi part (ms)	R	114	16.6	60	151	22
	W	132	16.0	88	166	14
	64	158	19.6	112	217	20
	73	195	17.4	132	255	11
Dur, lo part (ms)	R	54	21.1	23	77	22
	W	195	13.7	138	236	14
	64	48	18.0	27	64	20
	73	52	15.7	39	64	11
Dur, 2nd hi part (ms)	R	35	26.8	21	54	22
	W	35	24.2	17	46	14
	64	44	30.3	21	73	20
	73	49	15.7	37	60	11
SBI, 1st peak (Hz)	R	1793	8.8	1521	2059	22
	W	1773	7.2	1538	1962	14
	64	1696	8.8	1481	1912	20
	73	1709	9.6	1439	2007	11
SBI, dip (Hz)	R	712	14.3	578	1024	22
	W	668	9.1	589	778	14
	64	680	9.4	542	791	20
	73	621	7.0	570	715	11
SBI, 2nd peak (Hz)	R	1142	11.4	853	1373	22
	W	1045	11.7	817	1308	14
	64	962	11.9	789	1220	20
	73	978	11.0	759	1131	11
Part 3:						
Dur (ms)	R	486	16.2	343	647	22
	W	432	11.3	316	517	14
	64	472	20.1	341	694	20
	73	405	16.4	263	502	11
SBI, start (Hz)	R	925	15.3	621	1162	22
	W	833	14.5	703	1068	14
	64	778	10.2	625	937	20
	73	750	10.5	646	869	11

continued...

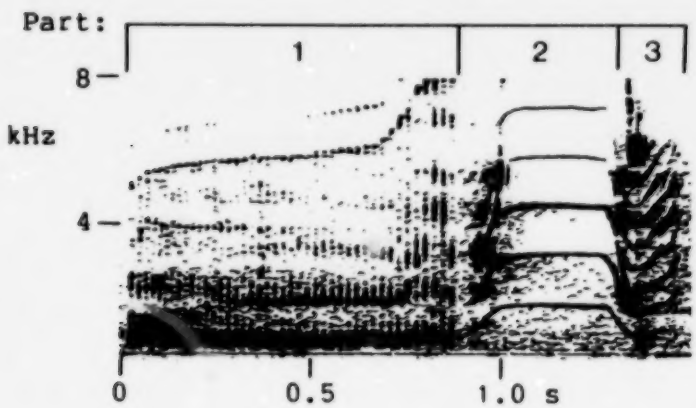
CALL N33 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, end (Hz)	R	2997	11.3	2266	3774	22
	W	2892	12.0	2305	3501	14
	64	2550	13.2	1922	3065	20
	73	2683	16.4	2062	3501	11
Part 4:						
Dur (ms)	R	148	20.1	119	210	7
	W	109	25.2	81	147	4
	64	173	----	---	---	1
	73	164	19.0	133	235	9
f, SB1, peak (Hz)	R	5379	18.2	3993	7066	20
	W	4663	8.4	4000	5279	7
	64	4352	14.9	3943	5422	5
	73	4455	17.9	3211	5619	11
f, SB1, end (Hz)	R	2718	16.1	2320	3335	7
	W	2985	9.0	2723	3326	4
	64	4056	----	----	----	1
	73	2590	3.8	2492	2763	9
Tone: f, start (Hz)	R	5288	27.3	2088	7281	15
	W	4527	32.9	1957	5940	10
	64	4041	25.8	2389	6324	18
	73	2896	27.5	2028	3987	7

CALL N33 - Measurement Comparisons

Measurement	R vs W	R vs 64	W vs 64
Duration (ms)	ns	ns	ns
Part 1:			
Dur (ms)	ns	ns	ns
IPI (ms)	ns	ns	ns
Part 2:			
Dur (ms)	ns	<0.001	ns
Dur, 1st hi (ms)	ns	<0.001	ns
Dur, lo (ms)	<0.001	ns	<0.001
SBI, 1st peak (Hz)	ns	ns	ns
SBI, dip (Hz)	ns	ns	ns
SBI, 2nd peak (Hz)	ns	<0.001	ns
Part 3:			
Dur (ms)	ns	ns	ns
SBI, start (Hz)	ns	<0.001	ns
SBI, end (Hz)	ns	<0.01	ns
Part 4:			
Dur (ms)	ns	----	----
f, SB1, peak (Hz)	ns	ns	ns
f, SB1, end	ns	----	----
Tone: f, start (Hz)	ns	ns	ns

CALL N34



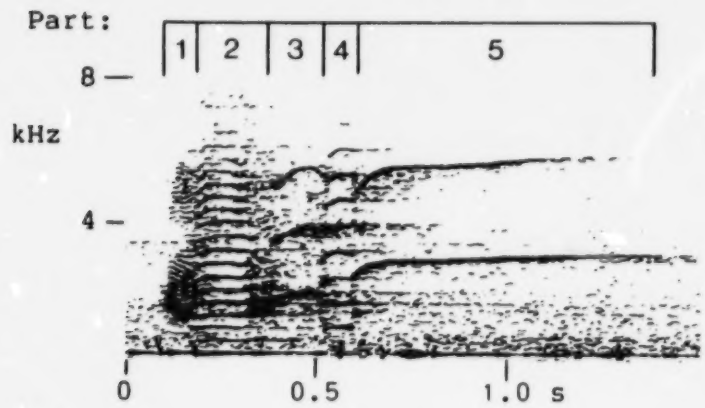
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	R	1320	17.9	987	1768	11
	W	1335	12.8	1022	1498	8
	64	1324	13.3	1086	1689	14
	73	1085	6.6	1034	1136	2
Part 1:						
Dur (ms)	R	778	29.8	434	1215	11
	W	799	23.8	433	961	8
	64	673	24.4	420	1012	14
	73	457	7.1	434	480	2
IPI (ms)	R	20	12.0	16	25	11
	W	21	9.8	19	26	8
	64	19	8.7	17	23	13
	73	21	6.7	20	22	2
Part 2:						
Dur (ms)	R	421	8.0	335	462	11
	W	423	6.0	396	480	8
	64	451	21.7	236	642	14
	73	488	7.0	464	512	2

continued...

CALL N34 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, start (Hz)	R	1226	16.3	960	1636	11
	W	989	22.0	799	1392	8
	64	1285	13.5	993	1643	14
	73	946	4.0	920	973	2
SBI, peak (Hz)	R	1492	5.6	1390	1698	11
	W	1434	3.6	1381	1519	8
	64	1416	17.1	628	1717	14
	73	1380	1.5	1366	1395	2
Part 3:						
Dur (ms)	R	120	18.5	85	161	11
	W	112	13.6	96	143	8
	64	199	48.9	127	515	14
	73	140	4.0	136	144	2
SBI, start (Hz)	R	671	3.9	626	722	11
	W	669	7.1	628	771	8
	64	673	10.6	586	891	14
	73	642	5.1	619	665	2
SBI, end (Hz)	R	955	13.2	827	1268	11
	W	905	17.0	712	1185	8
	64	923	12.7	692	1093	14
	73	922	4.1	895	949	2

Call N35



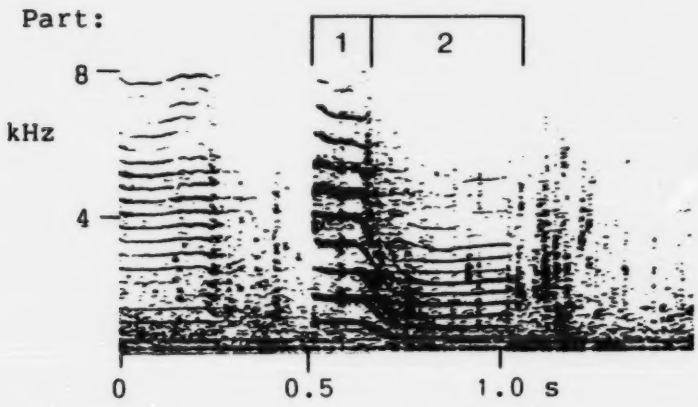
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	R	1056	16.5	648	1275	10
	W	612	5.1	571	668	6
Part 1:						
Dur (ms)	R	86	18.1	58	109	10
	W	68	5.0	63	72	5
SBI (Hz)	R	129	21.5	96	179	10
	W	122	17.8	91	144	6
Part 2:						
Dur (ms)	R	143	13.8	124	182	10
	W	90	22.7	61	118	5
SBI (Hz)	R	303	11.6	249	357	10
	W	299	11.9	255	350	5
Part 3:						
Dur (ms)	R	202	16.5	123	238	10
	W	167	15.5	122	185	5
SBI (Hz)	R	1790	10.5	1483	2108	10
	W	1982	9.2	1797	2232	6

continued...

CALL N35 - continued...

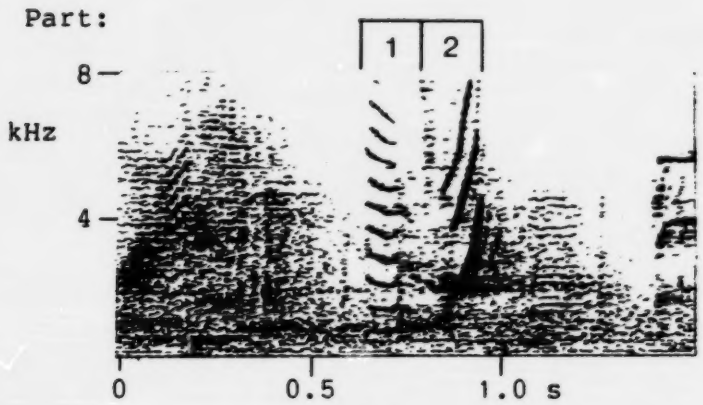
Measurement	Pod	Mean	C.V.	Min	Max	n
Part 4:						
Dur (ms)	R	115	26.3	85	182	9
	W	117	32.6	84	183	5
SBI (Hz)	R	698	10.1	623	795	8
	W	842	10.4	741	945	5
Part 5:						
Dur (ms)	R	518	34.3	189	746	9
	W	157	37.7	65	228	5
SBI, start (Hz)	R	2207	16.8	1659	2771	10
	W	2376	7.4	2103	2525	5
SBI, end (Hz)	R	2534	11.6	2026	2836	10
	W	3024	8.6	2588	3273	5

CALL N38



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	G	576	15.8	412	707	9
Part 1:						
Dur (ms)	G	244	23.5	181	330	9
SBI (Hz)	G	827	8.7	739	978	9
Part 2:						
Dur (ms)	G	331	17.2	231	412	9
SBI (Hz)	G	314	18.5	229	395	7

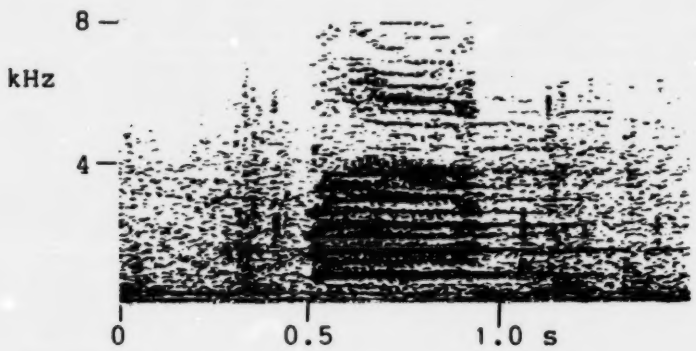
CALL N39



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	I11	305	15.0	223	381	12
Part 1:						
Dur (ms)	I11	97	21.4	70	150	12
SBI (Hz)	I11	845	9.5	716	977	11
Part 2:						
Dur (ms)	I11	208	18.8	122	267	12
SBI, start (Hz)	I11	1693	22.9	896	2318	12
SBI, end (Hz)	I11	2953	25.3	1857	4523	12

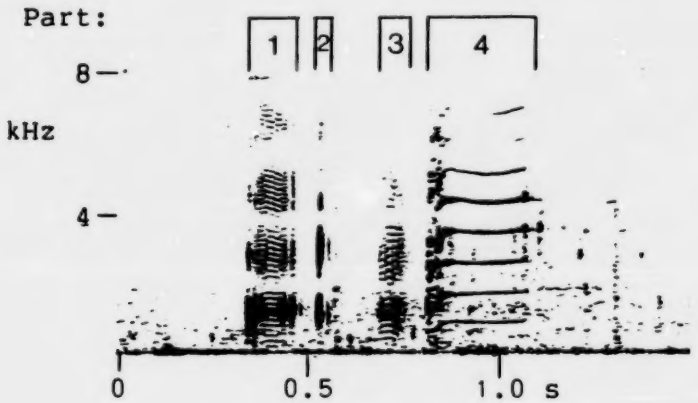
CALL N40

Part:



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	G	401	30.5	229	695	12
SBI, start (Hz)	G	563	21.8	390	803	12
SBI, peak (Hz)	G	715	12.2	611	870	12
SBI, end (Hz)	G	535	26.1	293	766	12
IPI (ms)	G	23	13.6	18	28	12

CALL N41



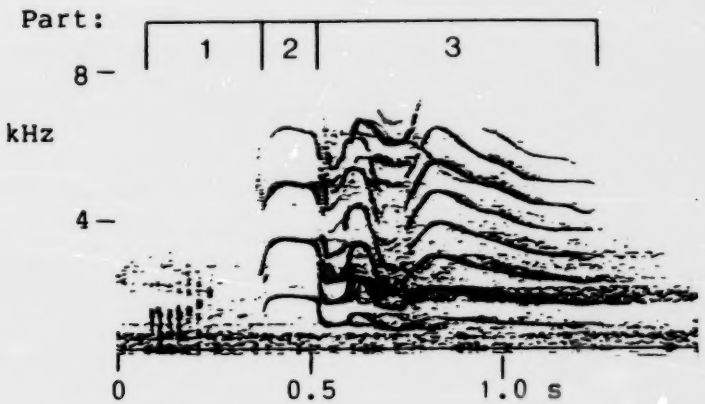
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	G	789	6.6	713	876	15
	I11	705	23.5	532	957	6
Part 1:						
Dur (ms)	G	134	10.3	109	163	15
	I11	137	17.9	117	179	6
SBI (Hz)	G	120	25.5	72	183	15
	I11	120	17.7	96	144	6
Dur, gap between Pts. 1 & 2 (ms)	G	84	28.7	49	128	15
	I11	116	50.3	59	224	6
Dur, gap between Pts. 2 & 3 (ms)	G	126	28.0	64	189	15
	I11	139	38.3	92	235	6
Part 3:						
Dur (ms)	G	65	15.1	48	84	15
	I11	60	22.6	43	82	6
SBI (Hz)	G	139	25.3	85	191	15
	I11	131	42.4	62	204	6
Dur, gap between Pts. 3 & 4 (ms)	G	72	19.1	45	97	15
	I11	79	26.2	51	109	6

continued...

CALL N41 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 4:						
Dur (ms)	G	308	15.3	232	409	15
	I11	172	47.9	63	272	6
SBI, start (Hz)	G	509	18.7	393	757	15
	I11	654	14.0	507	781	6
SBI, end (Hz)	G	854	6.8	752	944	15
	I11	858	22.8	546	1115	6

CALL N42



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	R	1272	7.3	1089	1460	20
	64	1265	4.0	1233	1323	3
Part 1:						
Dur (ms)	R	419	22.9	281	614	20
	64	407	18.5	322	464	3

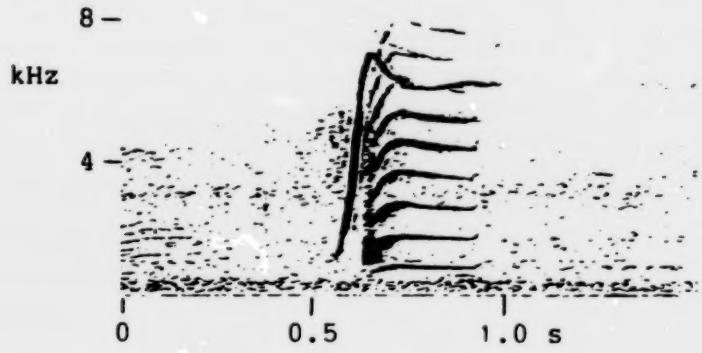
continued...

CALL N42 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
IPI (ms)	R	24	19.4	16	30	14
	64	21	18.9	17	25	3
Part 2:						
Dur (ms)	R	228	26.6	151	354	20
	64	245	24.3	177	287	3
SBI (Hz)	R	1513	6.2	1351	1693	20
	64	1427	1.4	1405	1443	3
Part 3:						
Dur (ms)	R	625	17.9	444	749	20
	64	613	17.4	533	734	3
SBI, start (Hz)	R	677	10.5	563	788	20
	64	734	5.7	689	772	3
SBI, peak (Hz)	R	986	9.6	735	1130	20
	64	1076	9.3	994	1187	3
SBI, dip (Hz)	R	572	14.9	451	766	20
	64	596	5.8	557	620	3
SBI, end (Hz)	R	782	15.7	609	1110	20
	64	780	15.7	669	911	3

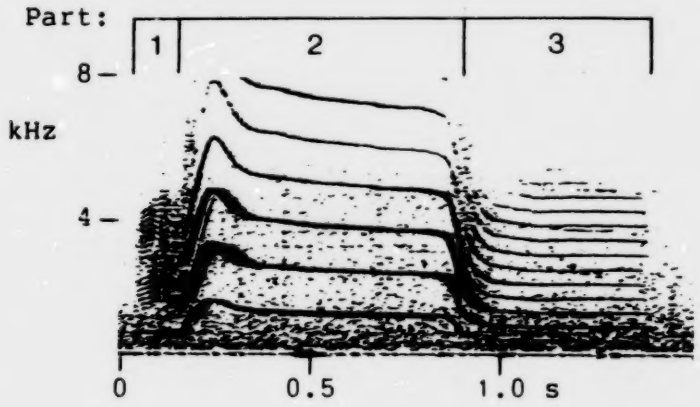
CALL N43

Part:



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	R	345	12.7	281	435	20
	W	293	8.9	269	331	5
	64	445	18.3	388	503	2
	73	399	----	---	---	1
SBI, start (Hz)	R	776	10.6	657	984	20
	W	726	7.0	681	809	5
	64	911	3.0	892	931	2
	73	691	----	---	---	1
SBI, end (Hz)	R	745	7.8	536	817	20
	W	770	7.9	709	859	5
	64	781	4.1	759	804	2
	73	710	----	---	---	1
Tone: f, start (Hz)	R	1607	30.0	931	2986	20
	W	1416	23.7	1022	1830	5
	64	1902	11.3	1750	2054	2
	73	1376	----	----	----	1
f, peak (Hz)	R	6307	2.6	5969	6564	20
	W	6470	1.7	6346	6636	5
	64	6466	2.6	6348	6585	2
	73	5596	---	----	----	1
f, end (Hz)	R	5607	2.0	5380	5744	20
	W	5700	2.8	5470	5850	5
	64	5620	2.2	5531	5709	2
	73	4989	---	----	----	1

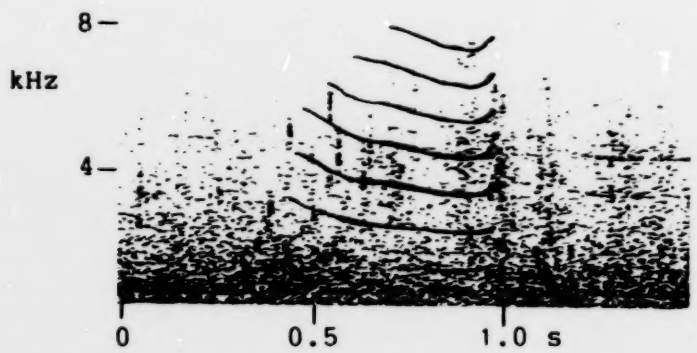
CALL N44



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	G	1396	14.0	1054	1736	23
Part 1:						
Dur (ms)	G	118	29.6	68	219	23
SBI (Hz)	G	126	19.0	58	171	23
Part 2:						
Dur (ms)	G	859	17.6	592	1218	23
SBI, start (Hz)	G	675	24.2	434	1015	23
SBI, peak (Hz)	G	1914	10.1	1501	2140	23
SBI, end (Hz)	G	1157	10.8	901	1479	23
Part 3:						
Dur (ms)	G	418	16.8	235	571	23
SBI, start (Hz)	G	479	16.8	314	607	23
SBI, end (Hz)	G	497	14.9	314	579	23

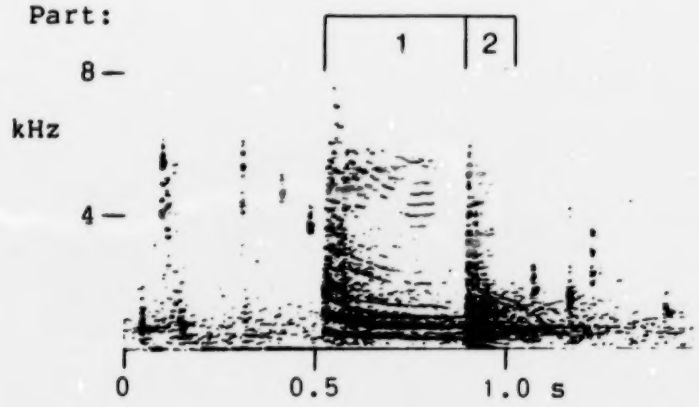
CALL N45

Part:



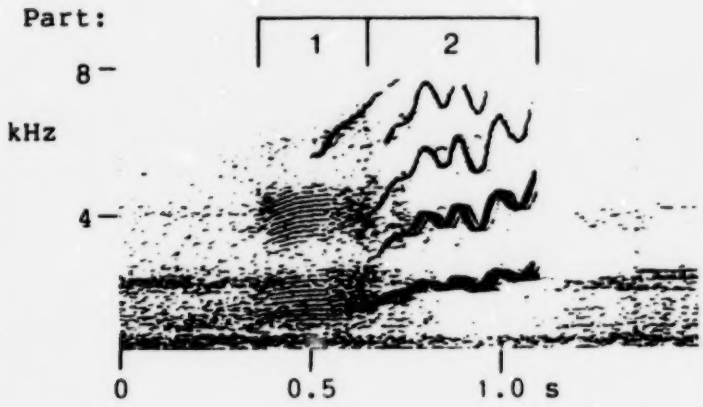
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	G	208	47.9	87	414	12
	I11	238	----	--	---	1
SBI, start (Hz)	G	1172	6.9	1025	1315	12
	I11	1086	---	----	----	1
SBI, end (Hz)	G	1201	6.8	1076	1305	12
	I11	1211	---	----	----	1

CALL N46



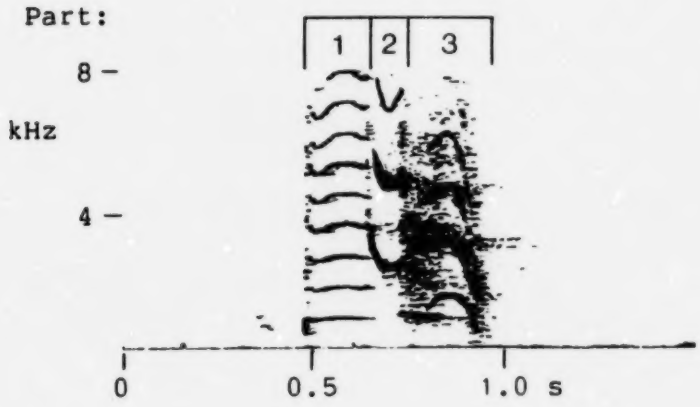
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	G	356	8.6	320	383	4
	I11	427	7.9	349	488	15
Part 1:						
Dur (ms)	G	241	2.8	238	252	4
	I11	355	6.3	305	389	15
SBI, start (Hz)	G	578	22.4	388	664	4
	I11	563	17.6	433	762	15
SBI, end (Hz)	G	228	11.2	192	251	4
	I11	280	11.6	240	328	15
Dur, gap between Pts. 1 & 2 (ms)	G	84	31.0	56	113	4
	I11	47	47.2	16	86	15
Part 2:						
Dur (ms)	G	30	13.6	25	35	4
	I11	24	23.3	18	39	15
f, peak emphasis (Hz)	G	799	14.3	681	953	4
	I11	1059	13.1	818	1233	15

CALL N47



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	A1	838	17.7	612	1243	26
Part 1:						
Dur (ms)	A1	385	34.1	217	742	26
SBI (Hz)	A1	141	12.8	105	176	26
Part 2:						
Dur (ms)	A1	453	24.2	225	693	26
SBI, start (Hz)	A1	1139	18.4	700	1477	26
SBI, end (Hz)	A1	2390	16.9	1800	3338	26
Tone: f, start (Hz)	A1	4762	15.8	2959	6324	24

CALL N48



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	G	505	4.5	481	526	3
	I11	640	19.5	488	787	9
Part 1:						
Dur (ms)	G	175	5.0	166	183	3
	I11	180	16.3	129	219	9
SBI, start (Hz)	G	797	16.0	652	891	3
	I11	711	27.8	446	1002	9
SBI, end (Hz)	G	2764	9.6	2492	3020	3
	I11	3011	10.7	2425	3360	9
Part 2:						
Dur (ms)	G	109	11.9	96	122	3
	I11	118	23.0	82	180	9
SBI (Hz)	G	1846	52.3	731	2421	3
	I11	1704	39.9	692	2357	9

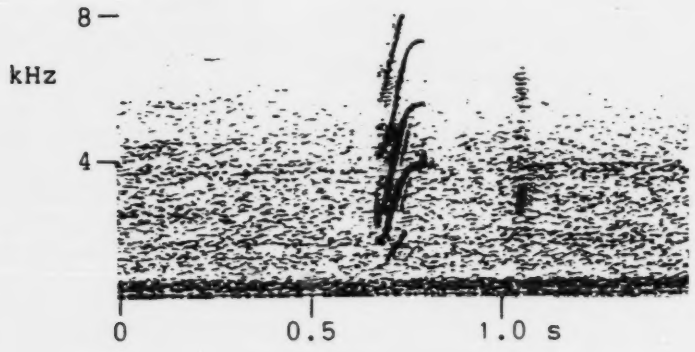
continued...

CALL N48 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 3:						
Dur (ms)	G	220	12.3	205	252	3
	I11	340	30.0	239	500	9
SBI, peak (Hz)	G	1279	19.7	1018	1520	3
	I11	1454	18.0	1018	1773	9
SBI, end (Hz)	G	970	14.8	822	1109	3
	I11	674	30.5	387	1014	9

CALL N50

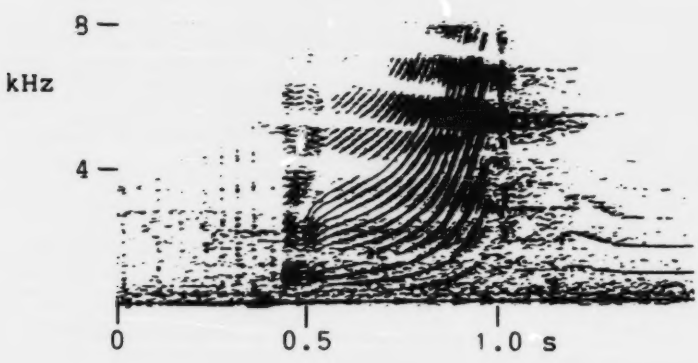
Part:



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	R	146	15.1	124	200	10
	W	167	11.4	154	181	2
	64	180	----	---	---	1
	73	207	----	---	---	1
SBI, start (Hz)	R	849	33.6	483	1199	10
	W	498	41.7	351	645	2
	64	816	----	---	----	1
	73	603	----	---	----	1
SBI, peak (Hz)	R	1478	6.2	1275	1579	10
	W	1402	7.4	1329	1475	2
	64	1522	---	----	----	1
	73	1517	---	----	----	1
SBI, end (Hz)	R	1489	5.2	1381	1633	10
	W	1414	3.8	1376	1453	2
	64	1448	---	----	----	1
	73	1545	---	----	----	1

CALL N51

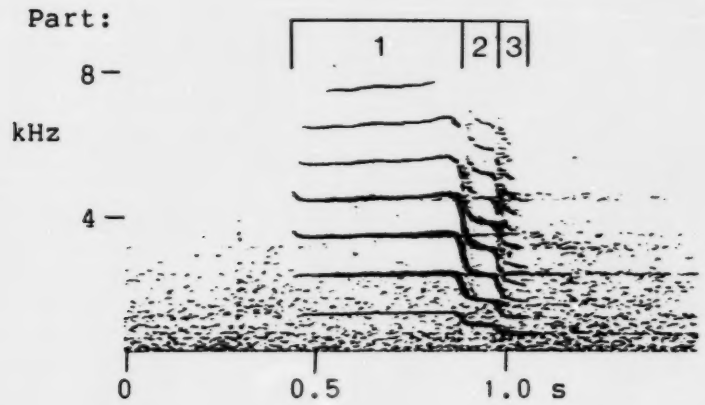
Part:



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	R	828	27.8	385	1212	11
	W	576	1.8	565	585	3
	73	624	17.0	511	721	3
SBI, start (Hz)	R	182	32.8	85	273	11
	W	145	17.9	121	173	3
	73	224	23.5	170	275	3
SBI, end (Hz)	R	1281	15.6	1063	1751	11
	W	1355	4.0	1308	1414	3
	73	1193	10.7	1068	1323	3

SOUTHERN COMMUNITY CALLS:

CALL S1



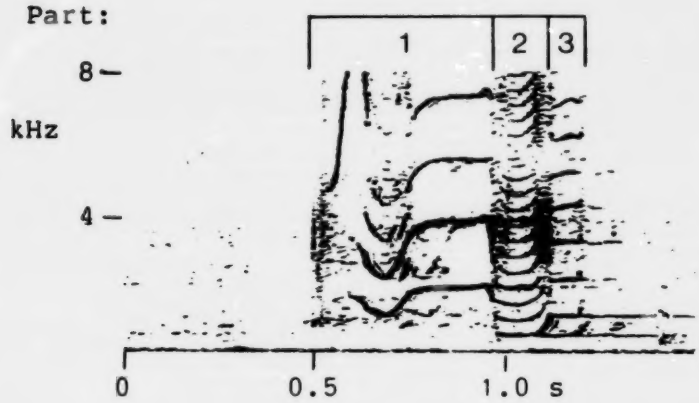
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	884	38.5	527	1986	52
	MD	736	6.9	649	815	9
	Sh	803	21.6	500	955	6
Part 1:						
Dur (ms)	J	629	44.5	341	1464	48
	MD	596	7.3	526	678	9
	Sh	509	24.4	306	667	6
SBI, start (Hz)	J	1020	6.1	885	1178	52
	MD	1184	4.2	1099	1245	9
	Sh	1162	9.1	1023	1329	6

continued...

CALL S1 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
SBI, end (Hz)	J	1065	11.6	880	1515	52
	MD	1195	4.6	1122	1275	9
	Sh	1140	7.0	1033	1224	6
Part 2:						
Dur (ms)	J	99	34.5	42	234	48
	MD	77	21.9	45	100	9
	Sh	151	52.2	95	308	6
SBI, start (Hz)	J	693	19.4	546	1370	48
	MD	1027	5.5	954	1113	9
	Sh	771	11.0	669	911	6
SBI, end (Hz)	J	573	13.4	403	733	48
	MD	1026	8.8	816	1118	9
	Sh	523	10.1	461	589	6
Part 3:						
Dur (ms)	J	118	32.7	63	295	48
	MD	64	16.0	46	77	9
	Sh	142	45.0	41	219	6
SBI, end (Hz)	J	413	13.0	270	550	52
	MD	735	10.1	615	810	9
	Sh	447	5.6	418	483	6

CALL S2i



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	844	23.8	575	1615	34
	MD	954	22.3	745	1500	21
	Sh	912	11.3	690	1168	23
Part 1:						
Dur (ms)	J	577	31.5	325	1308	34
	MD	499	39.6	343	1062	21
	Sh	572	14.1	447	746	23
SBI, start (Hz)	J	1176	25.8	605	1737	34
	MD	1767	10.7	1459	2026	9
	Sh	1394	13.0	1021	1733	9
SBI, dip (Hz)	J	1012	17.4	624	1387	34
	MD	1187	38.6	548	1876	20
	Sh	1296	13.5	857	1542	23
SBI, end (Hz)	J	1929	9.5	1605	2243	34
	MD	2174	9.2	1831	2474	20
	Sh	2051	7.9	1803	2359	23

continued...

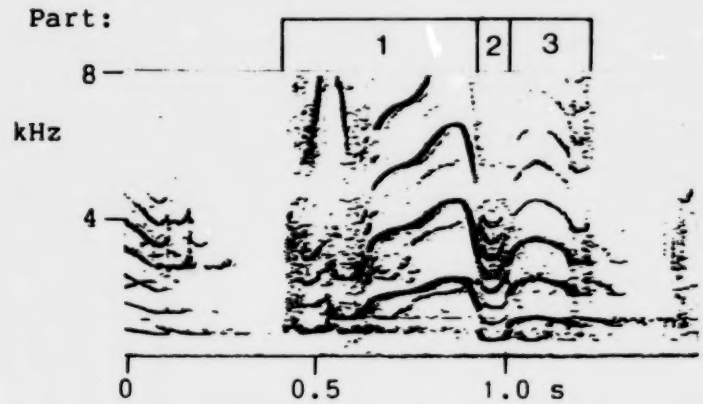
CALL S2i - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 2:						
Dur (ms)	J	141	14.1	108	191	34
	MD	325	22.7	212	464	21
	Sh	239	30.9	135	407	23
SBI, start (Hz)	J	497	18.0	323	694	34
	MD	607	12.0	407	743	20
	Sh	499	12.0	379	653	23
SBI, dip (Hz)	J	459	15.2	359	692	34
	MD	627	10.2	500	724	20
	Sh	518	9.3	459	660	23
SBI, end (Hz)	J	2118	17.9	1364	2881	34
	MD	2589	22.2	1520	3365	21
	Sh	2523	21.2	1555	3852	23
Part 3:						
Dur (ms)	J	125	27.0	82	223	34
	MD	129	38.7	62	259	21
	Sh	100	23.5	52	152	23
SBI, end (Hz)	J	1017	10.4	830	1300	34
	MD	1744	19.5	822	2110	20
	Sh	1141	13.7	824	1391	23
Tone: f, start (Hz)	J	4683	13.7	3772	6484	29
	MD	4254	30.9	2561	5750	4
	Sh	4258	6.5	3994	4848	9

CALL S2i - Measurement Comparisons

Measurement	J vs MD	J vs Sh	MD vs Sh
Duration (ms)	ns	ns	ns
Part 1:			
Dur (ms)	ns	ns	ns
SBI, start (Hz)	--	--	--
SBI, dip (Hz)	ns	<0.001	ns
SBI, end (Hz)	<0.001	ns	ns
Part 2:			
Dur (ms)	<0.001	<0.001	<0.001
SBI, start (Hz)	<0.001	ns	<0.001
SBI, dip (Hz)	<0.001	<0.01	<0.001
SBI, end (Hz)	<0.01	<0.05	ns
Part 3:			
Dur (ms)	ns	<0.05	<0.05
SBI, end (Hz)	<0.001	ns	<0.001
Tone: f, start	ns	ns	ns

CALL S2ii



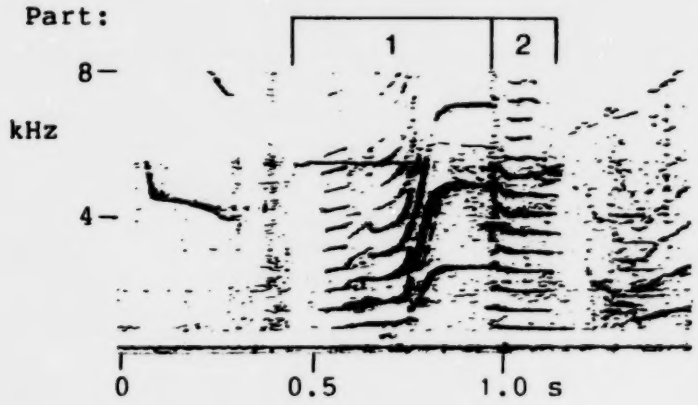
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	840	15.2	642	1040	13
	MD	839	14.9	637	980	9
Part 1:						
Dur (ms)	J	572	27.5	370	965	13
	MD	423	20.3	308	531	9
SBI, start (Hz)	J	1229	20.7	733	1587	13
	MD	1944	11.7	1783	2105	2
SBI, dip (Hz)	J	1057	15.1	622	1266	13
	MD	966	48.1	435	1780	9
SBI, end (Hz)	J	2063	9.1	1770	2400	13
	MD	2264	18.1	1863	2835	9
Part 2:						
Dur (ms)	J	133	17.5	88	172	13
	MD	190	29.7	110	252	9
SBI, start (Hz)	J	519	13.6	359	615	13
	MD	616	9.1	488	676	9
SBI, dip (Hz)	J	466	35.5	270	958	13
	MD	634	12.6	494	722	9

continued...

CALL S2ii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 2:						
SBI, end (Hz)	J	2159	13.6	1490	2461	11
	MD	2769	21.8	2104	3982	9
Part 3:						
Dur (ms)	J	166	33.7	109	306	12
	MD	225	13.1	182	280	9
SBI, peak (Hz)	J	1138	19.8	684	1600	13
	MD	2398	18.3	1824	3001	9
SBI, end (Hz)	J	878	16.4	681	1076	13
	MD	1546	19.2	1226	2124	9
Tone: start (Hz)	J	4413	10.3	3693	5056	10

CALL S2iii



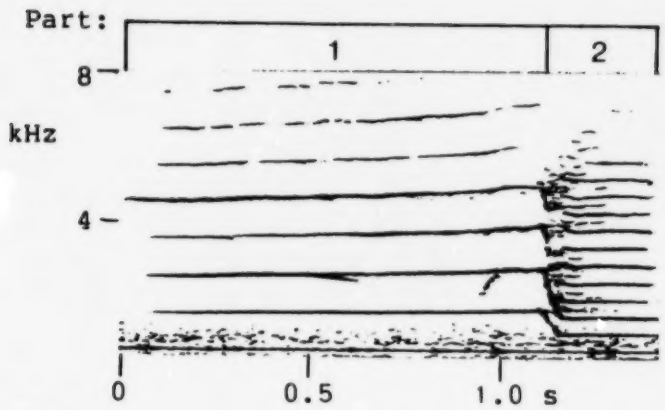
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	L	617	23.8	384	982	26
	73	741	1.9	731	751	2
Part 1:						
Dur (ms)	L	466	29.5	216	873	26
	73	624	2.5	613	635	2
Time to upsweep (ms)	L	304	32.0	194	613	24
	73	356	4.8	344	368	2
SBI, start (Hz)	L	554	9.9	464	688	26
	73	435	24.7	359	511	2
SBI, end (Hz)	L	2649	10.1	2358	3686	25
	73	2769	6.0	2651	2887	2

continued...

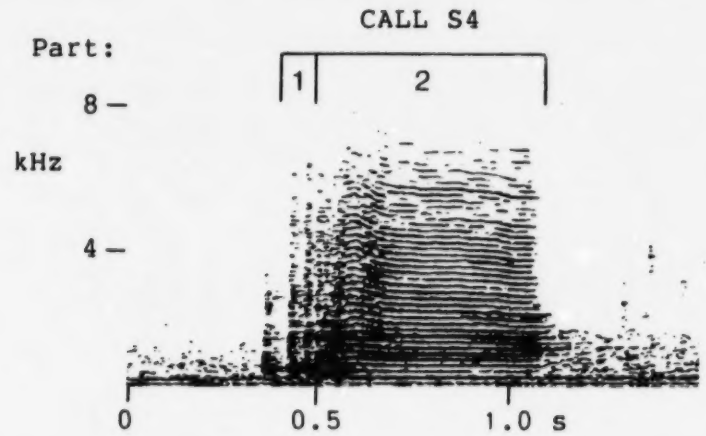
CALL S2iii - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Part 2:						
Dur (ms)	L	150	30.7	79	268	26
	73	117	1.2	116	118	2
SBI, start (Hz)	L	606	18.8	408	828	26
	73	548	6.7	522	574	2
SBI, end (Hz)	L	542	20.4	336	793	26
	73	522	20.6	446	598	2
Tone:						
f, start (Hz)	L	5557	4.5	5103	6033	25
	73	6247	6.9	5943	6551	2
f, end (Hz)	L	6419	11.1	5398	7813	24
	73	6791	12.2	6207	7375	2

CALL S3



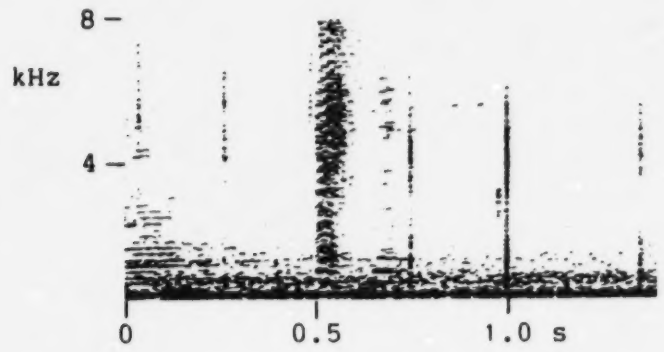
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	1195	24.3	598	1649	21
	MD	1079	3.6	1025	1135	10
Part 1:						
Dur (ms)	J	964	30.4	433	1449	21
	MD	909	3.8	872	952	10
SBI, start (Hz)	J	1068	4.0	994	1166	21
	MD	955	4.6	868	1028	10
SBI, end (Hz)	J	1068	6.6	972	1245	21
	MD	898	5.6	831	982	10
Part 2:						
Dur (ms)	J	231	17.5	165	313	21
	MD	169	6.8	153	189	10
SBI, start (Hz)	J	453	6.3	395	500	21
	MD	408	5.0	377	431	10
SBI, end (Hz)	J	455	6.8	396	516	21
	MD	400	6.7	356	435	10



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	758	26.8	484	1269	29
Part 1:						
Dur (ms)	J	188	39.6	87	425	29
IPI, start (ms)	J	52	24.0	30	75	29
Part 2:						
Dur (ms)	J	570	26.8	380	968	29
SBI (Hz)	J	159	11.5	120	191	29

CALL S5

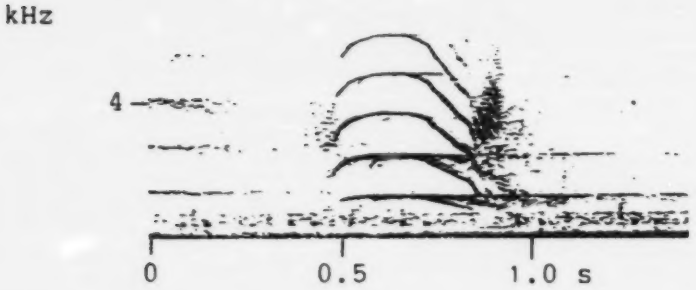
Part:



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	81	25.1	45	116	16
	Sh	123	8.7	107	130	4
SBI (Hz)	J	294	9.2	235	331	16
	Sh	364	3.5	351	381	4

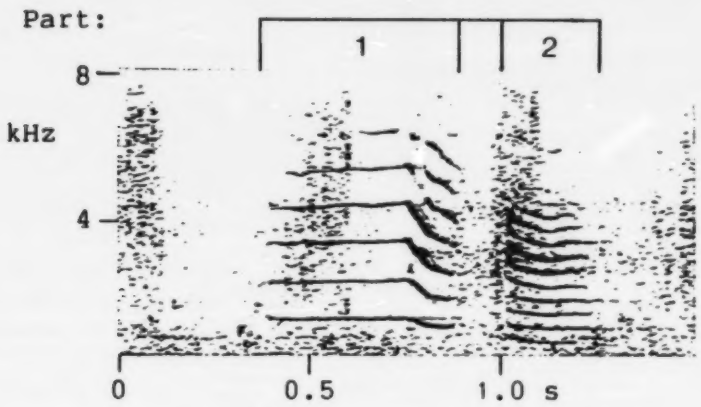
CALL S6

Part:



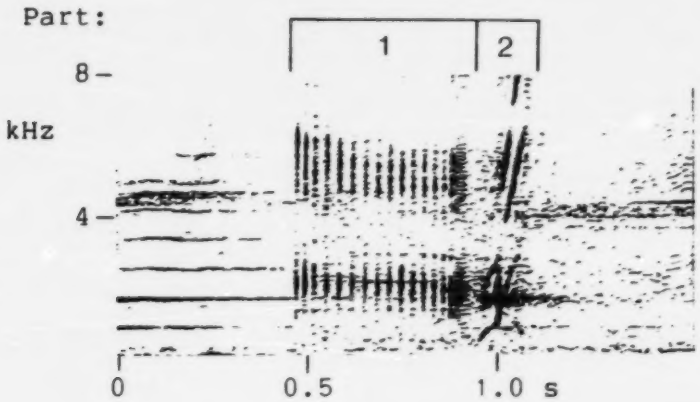
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	466	17.4	315	580	21
SBI, start (Hz)	J	950	15.1	686	1176	21
SBI, peak (Hz)	J	1033	12.5	861	1336	21
SBI, end (Hz)	J	251	16.4	170	343	21

CALL S7



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	905	15.7	706	1246	23
Part 1:						
Dur (ms)	J	607	22.7	427	957	23
Time to down-sweep (ms)	J	470	28.8	278	839	23
SBI, start (Hz)	J	1023	4.7	933	1137	23
SBI, end (Hz)	J	613	12.7	452	739	23
Dur, gap between Pts. 1 & 2 (ms)	J	135	29.9	74	283	23
Part 2:						
Dur (ms)	J	163	15.3	122	216	23
SBI, start (Hz)	J	444	12.1	375	574	23
SBI, end (Hz)	J	393	7.8	348	451	23

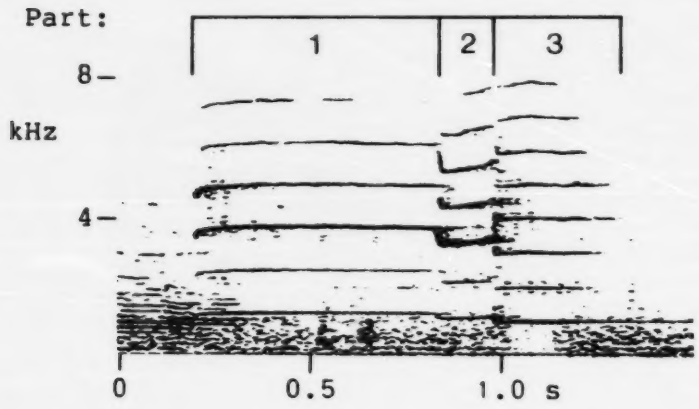
CALL S8 i & ii



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	221	63.4	78	459	17
	L	501	13.1	399	642	14
Part 1:						
Dur (ms)	J	123	98.3	14	337	17
	L	409	16.5	280	523	14
IPI, start (ms)	J	34	38.1	22	61	7
	L	29	18.7	21	42	14
Part 2:						
Dur (ms)	J	98	37.5	49	178	17
	L	92	14.5	73	119	14
SBI, start (Hz)	J	2542	15.6	1653	3223	17
	L	734	9.4	667	924	14
SBI, end (Hz)	J	6432	19.0	4099	7854	17
	L	5495	18.3	4300	7330	14

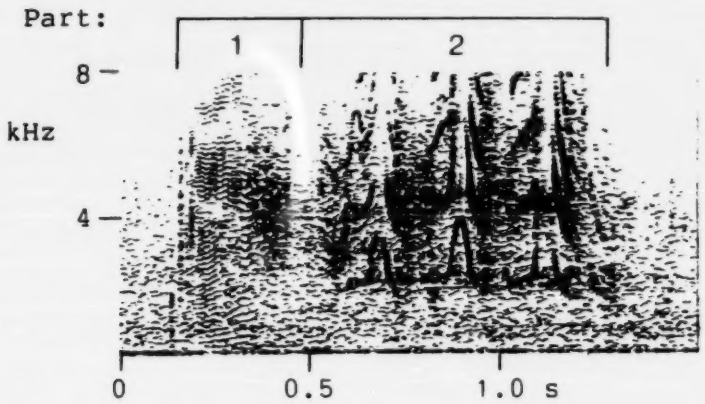
N.B.: Subtype S8i given by J pod, and S8ii by L pod.

CALL S9



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	1069	8.7	952	1249	11
Part 1:						
Dur (ms)	J	636	16.5	502	803	11
SBI, start (Hz)	J	1189	4.3	1136	1282	11
SBI, end (Hz)	J	1170	4.3	1107	1265	11
Part 2:						
Dur (ms)	J	173	11.9	131	200	11
SBI (Hz)	J	1046	5.6	975	1151	11
Part 3:						
Dur (ms)	J	258	13.0	214	315	11
SBI (Hz)	J	937	4.6	882	1002	11

CALL S10



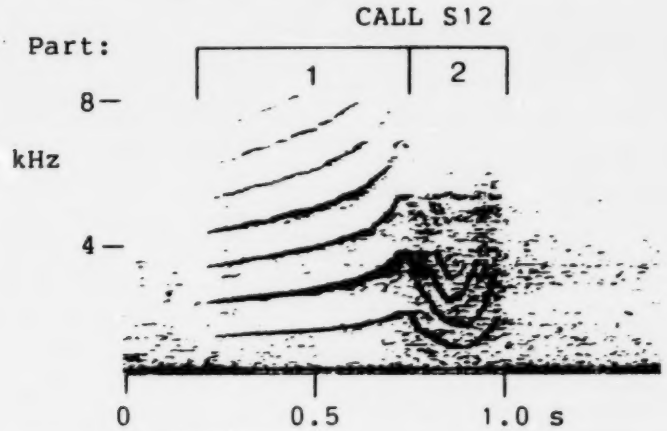
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	958	9.8	887	1103	5
	K	1035	4.4	992	1083	3
	L	1610	17.6	1160	1975	6
Part 1:						
Dur (ms)	J	369	14.6	305	431	5
	K	428	13.2	373	486	3
	L	451	15.3	356	519	6
SBI, start (Hz)	J	102	22.7	72	135	5
	K	107	22.0	84	131	3
	L	94	20.0	73	127	6
SBI, end (Hz)	J	229	38.6	177	387	5
	K	175	6.4	162	182	3
	L	196	18.6	149	230	6
Part 2:						
Dur (ms)	J	589	22.7	474	798	5
	K	606	9.5	544	657	3
	L	1159	20.7	804	1530	6
Dur, pulses (ms)	J	119	14.8	73	210	15
	K	113	34.2	67	180	9
	L	137	34.3	68	284	18

continued...

CALL S10 - continued...

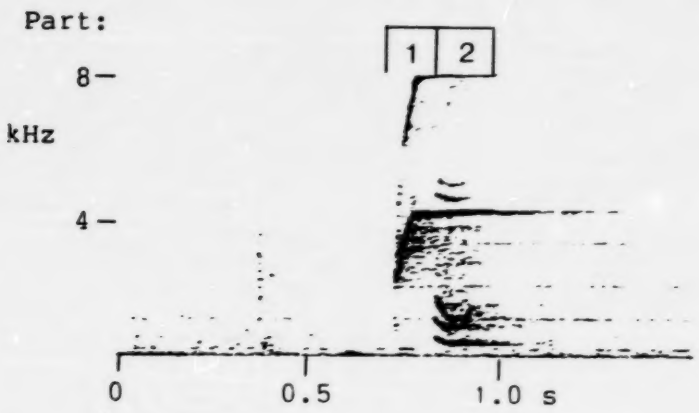
Measurement	Pod	Mean	C.V.	Min	Max	n
Dur, IPI's (ms)	J	77	8.1	49	120	15
	K	89	38.7	48	159	9
	L	132	38.6	77	233	11

CALL S12



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	954	25.4	726	1549	14
Part 1:						
Dur (ms)	J	650	36.0	400	1246	14
SBI, start (Hz)	J	1047	6.1	894	1119	14
SBI, end (Hz)	J	1944	16.3	1290	2515	14
Part 2:						
Dur (ms)	J	303	12.4	193	353	14
SBI, dip (Hz)	J	539	25.5	440	926	14
SBI, end (Hz)	J	1627	20.9	961	2260	14

CALL S13



Measurement	Pod	Mean	C.V.	Min	Max	n	p*
Duration (ms)	J	231	17.4	189	329	14	<0.001
	L	163	15.1	124	222	16	
	73	305	7.4	273	339	7	
Part 1:							
Dur (ms)	J	126	28.0	98	210	14	<0.001
	L	63	12.4	48	78	16	
	73	160	13.4	118	183	7	
Dur, level part (ms)	J	71	41.3	38	134	14	<0.001
	L	26	22.5	17	43	16	
	73	127	17.7	90	157	7	
SBI, start (Hz)	J	2688	10.4	1989	3083	14	ns
	L	2375	16.4	1405	2859	16	
	73	2791	25.2	1841	3662	7	
SBI, mid (Hz)	J	3938	3.5	3506	4089	14	<0.001
	L	3124	3.4	2905	3331	16	
	73	3179	5.2	2927	3421	7	
SBI, end (Hz)	J	3863	3.4	3453	3992	14	<0.001
	L	3140	3.6	2941	3367	16	
	73	3289	4.4	3124	3528	7	

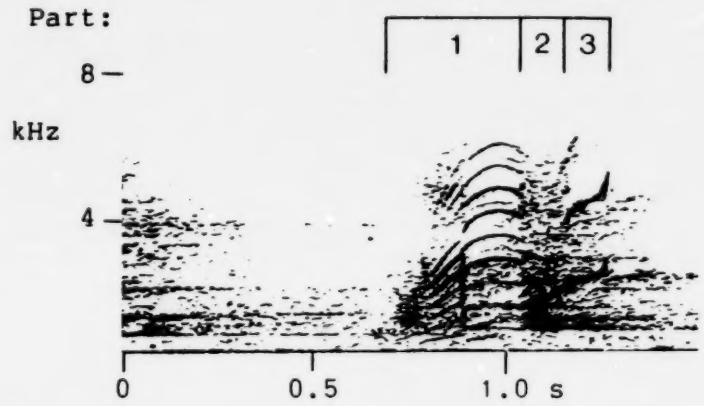
continued...

CALL S13 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n	p*
Part 2:							
Dur (ms)	J	105	14.1	87	130	14	ns
	L	100	19.0	76	144	16	
	73	145	21.8	93	196	7	
SBI, start (Hz)	J	480	16.9	362	678	14	ns
	L	465	15.0	375	595	16	
	73	597	37.1	343	1024	7	
SBI, dip (Hz)	J	434	16.9	351	618	14	ns
	L	479	12.1	375	559	16	
	73	591	33.1	408	967	7	
SBI, end (Hz)	J	493	17.4	378	661	14	ns
	L	536	22.4	348	813	16	
	73	555	37.7	270	924	7	

* ANOVA comparison between J and L pods only.

CALL S14



Measurement	Pod	Mean	C.V.	Min	Max	n	p*
Duration (ms)	J	539	5.9	518	587	4	
	MD	635	5.7	567	712	14	<0.001
	Sh	716	6.7	651	787	13	
Part 1:							
Dur (ms)	J	303	11.2	264	347	4	
	MD	372	8.2	322	416	14	<0.01
	Sh	439	15.5	352	604	14	
SBI, start (Hz)	J	266	21.2	215	337	4	
	MD	331	23.2	245	525	14	ns
	Sh	304	16.3	227	405	14	
SBI, mid (Hz)	J	512	12.8	454	582	4	
	MD	631	7.2	576	720	14	ns
	Sh	643	7.3	594	749	14	
SBI, end (Hz)	J	653	6.9	595	693	4	
	MD	642	6.6	568	705	14	ns
	Sh	684	12.2	583	853	13	
Part 2:							
Dur (ms)	J	108	11.1	91	121	4	
	MD	116	13.8	90	149	14	<0.001
	Sh	148	12.8	122	185	14	

continued...

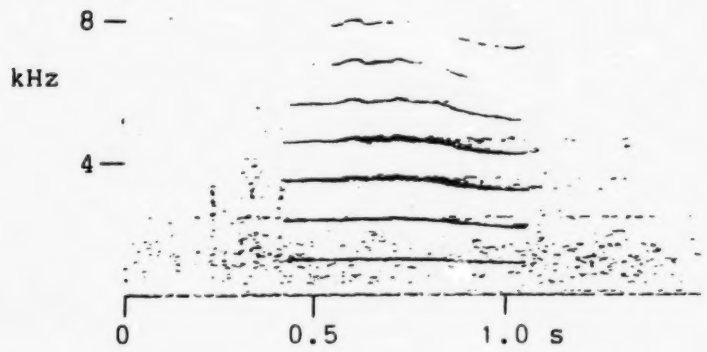
CALL S14 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n	p*
Part 3:							
Dur (ms)	J	128	10.7	109	141	4	
	MD	147	14.3	115	196	14	ns
	Sh	139	13.3	104	170	13	
SBI, start (Hz)	J	1721	7.0	1553	1815	4	
	MD	2290	6.0	2070	2529	14	ns
	Sh	2254	3.8	2128	2400	14	
SBI, end (Hz)	J	2185	3.3	2089	2247	4	
	MD	2316	5.1	2129	2516	14	ns
	Sh	2284	4.8	2110	2520	13	

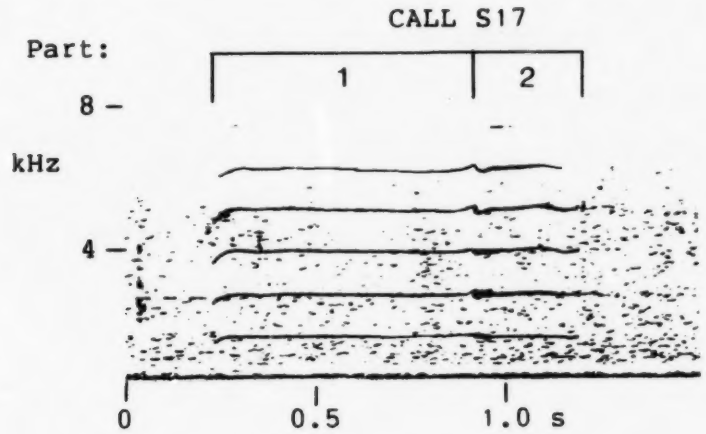
* ANOVA comparison between MD and Sh only.

CALL S16

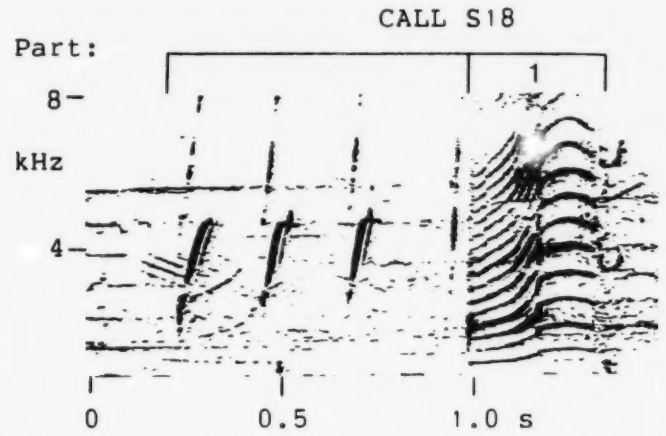
Part:



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	K	729	31.4	350	1264	15
	L	1088	30.6	709	1333	3
Time to downsweep (ms)	K	540	40.6	237	1102	15
	L	857	29.7	564	1023	3
SBI, start (Hz)	K	1138	6.2	962	1226	15
	L	1258	7.9	1147	1336	3
SBI, start of downsweep (Hz)	K	1123	10.3	881	1270	15
	L	1228	6.6	1160	1317	3
SBI, end (Hz)	K	950	9.7	732	1114	15
	L	984	10.5	870	1071	3



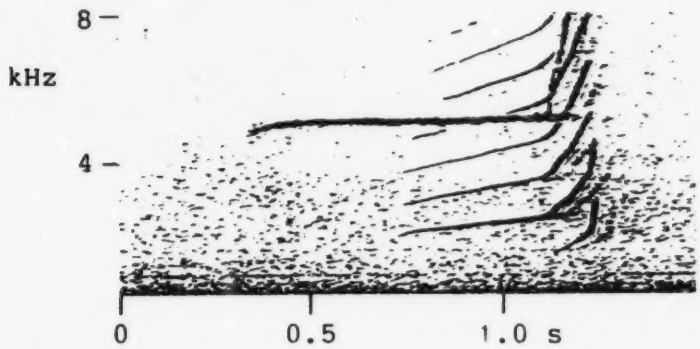
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	K	857	11.0	743	980	7
	L	870	----	---	---	1
Part 1:						
Dur (ms)	K	609	15.9	483	727	7
	L	717	----	---	---	1
SBI, start (Hz)	K	1219	3.7	1159	1283	7
	L	1201	---	----	----	1
SBI, mid (Hz)	K	1216	3.8	1166	1297	7
	L	1270	---	----	----	1
SBI, end (Hz)	K	1158	5.2	1076	1231	7
	L	1177	---	----	----	1
Part 2:						
Dur (ms)	K	247	14.2	184	292	7
	L	153	----	---	---	1
SBI, end (Hz)	K	1223	2.9	1187	1292	7
	L	1262	---	----	----	1



Measurement	Pod	Mean	C.V.	Min	Max	n	p
'Chirps:							
No./call	L	3	41.6	0	4	26	
	73	3	18.1	2	4	15	
Dur (ms)	L	80	17.5	47	97	23	ns
	73	87	14.9	66	116	30	
f, start (Hz)	L	1745	18.1	1208	2479	23	<0.001
	73	2312	9.9	1980	3001	30	
f, end (Hz)	L	4463	8.3	3321	4996	23	ns
	73	4400	5.2	4083	5008	30	
Part 1:							
Dur (ms)	L	418	21.6	256	568	16	ns
	73	422	20.9	342	597	11	
SBI, start (Hz)	L	377	8.6	327	427	16	ns
	73	383	9.6	332	455	11	
SBI, end (Hz)	L	703	10.3	575	810	16	ns
	73	757	6.9	685	846	11	

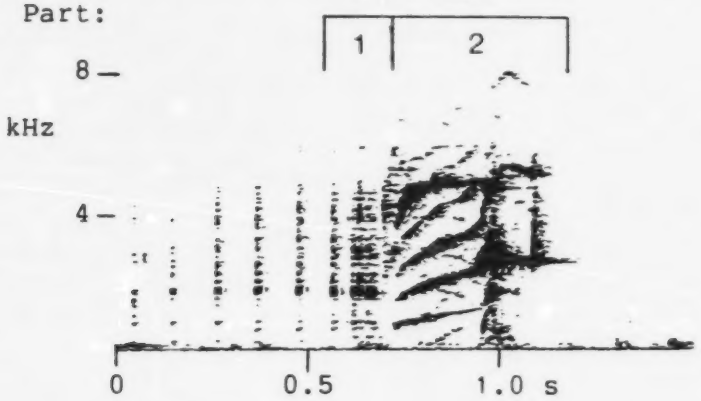
CALL S19

Part:



Measurement	Pod	Mean	C.V.	Min	Max	n	p
Duration (ms)	L	730	22.1	330	1099	35	ns
	73	844	28.9	559	1475	15	
Pulsed part:							
Dur (ms)	L	485	28.1	169	833	35	<0.01
	73	625	23.4	390	1048	15	
SBI, start (Hz)	L	827	23.5	471	1365	35	<0.001
	73	1103	13.0	812	1368	15	
SBI, end (Hz)	L	2004	23.5	1303	3128	35	ns
	73	2056	17.5	1468	2816	15	
Tone:							
Dur (ms)	L	682	24.8	240	1063	35	ns
	73	729	36.7	354	1367	15	
f, start (Hz)	L	4874	2.9	4562	5127	35	ns
	73	4906	5.0	4483	5447	15	
f, end (Hz)	L	5885	11.1	4976	7751	35	ns
	73	5655	10.0	4848	6828	15	

CALL S22



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	L	428	24.1	294	565	11
	73	585	10.7	509	733	12
Part 1:						
Dur (ms)	L	128	35.6	79	211	14
	73	152	24.3	92	199	12
SBI (Hz)	L	127	14.7	108	174	14
	73	96	15.7	72	117	10
Part 2:						
Dur (ms)	L	299	23.8	196	417	11
	73	433	11.9	381	556	12
Dur, level part (ms)	L	79	56.6	42	177	14
	73	134	48.5	71	300	12
SBI, start (Hz)	L	1029	21.8	806	1628	14
	73	908	13.0	720	1129	12
SBI, mid (Hz)	L	2356	14.8	1515	2669	14
	73	2656	4.8	2442	2824	12
SBI, end (Hz)	L	2442	15.7	1694	2975	11
	73	2721	5.1	2421	2909	12

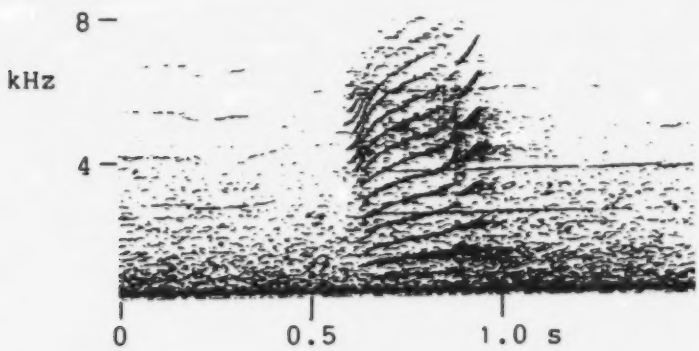
continued...

CALL S22 - continued...

Measurement	Pod	Mean	C.V.	Min	Max	n
Tone:						
f, start (Hz)	L	4388	17.6	3064	5546	14
	73	4028	10.8	3252	4745	11
f, level part (Hz)	L	5798	7.6	4961	6579	14
	73	5685	8.7	4607	6436	11
f, end (Hz)	L	5879	7.4	5062	6696	14
	73	5744	7.4	4801	6338	11

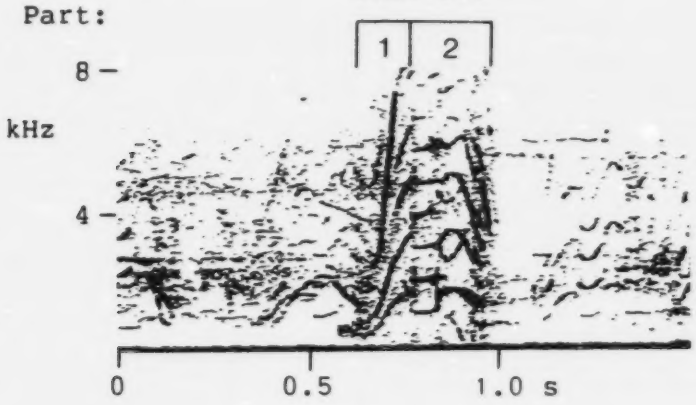
CALL S31

Part:

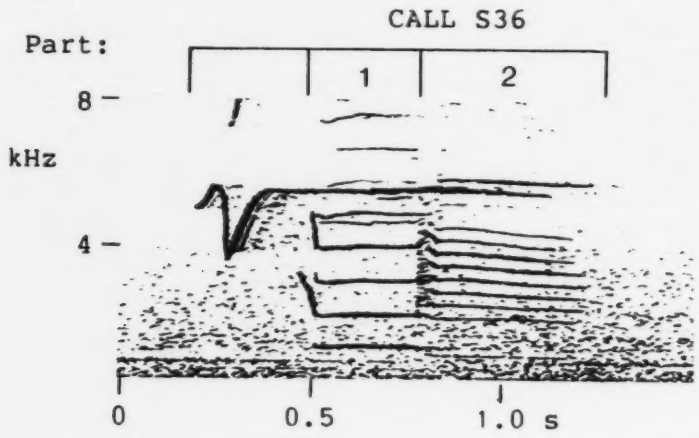


Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	L	481	26.5	338	738	23
SBI, start (Hz)	L	148	28.2	62	238	23
SBI, end (Hz)	L	706	27.6	382	1073	23

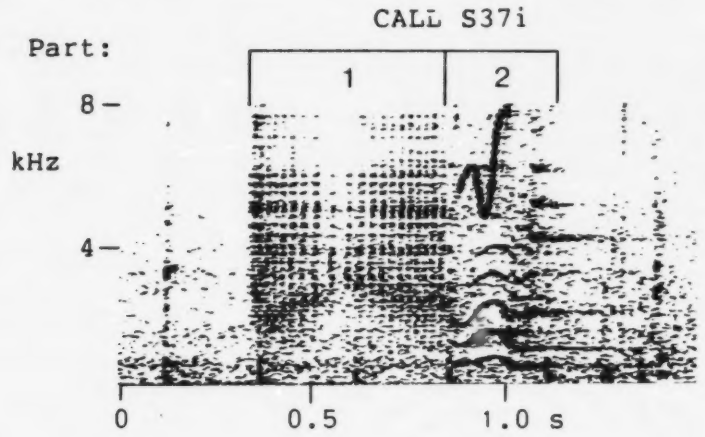
CALL S33



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	L	566	20.4	440	825	14
	73	586	60.3	321	1079	6
Part 1:						
Dur (ms)	L	166	21.5	93	239	15
	73	237	59.5	120	449	6
Part 2:						
Dur (ms)	L	396	27.0	299	654	14
	73	349	61.4	195	630	6
Dur, lo parts	L	66	25.7	29	108	34
(ms)	73	70	9.7	58	79	10
Dur, hi parts	L	85	18.5	44	107	24
(ms)	73	93	15.1	77	110	6
f, lo parts	L	866	18.0	556	1099	37
(Hz)	73	879	5.9	813	967	10
f, hi parts	L	1695	6.7	1470	1869	34
(Hz)	73	1685	5.8	1551	1805	10

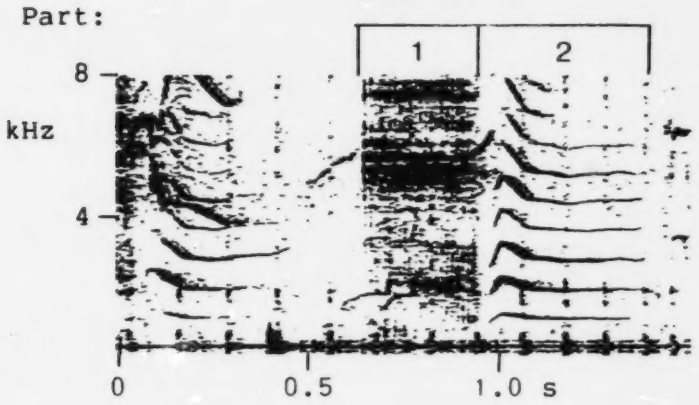


Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	L	951	11.0	750	1135	21
Part 1:						
Dur (ms)	L	302	12.7	223	378	28
SBI, start (Hz)	L	900	6.0	779	981	28
SBI, end (Hz)	L	848	6.7	750	955	28
Part 2:						
Dur (ms)	L	324	20.3	200	443	19
SBI, start (Hz)	L	333	16.4	244	452	21
SBI, end (Hz)	L	214	38.8	86	402	21
Tone:						
Dur (ms)	L	932	11.6	722	1182	28
f, start (Hz)	L	4751	9.5	3469	5485	27
f, peak (Hz)	L	5847	5.9	5371	6603	27
f, min (Hz)	L	3847	7.3	3441	4394	27
f, end (Hz)	L	5439	2.8	5128	5719	28

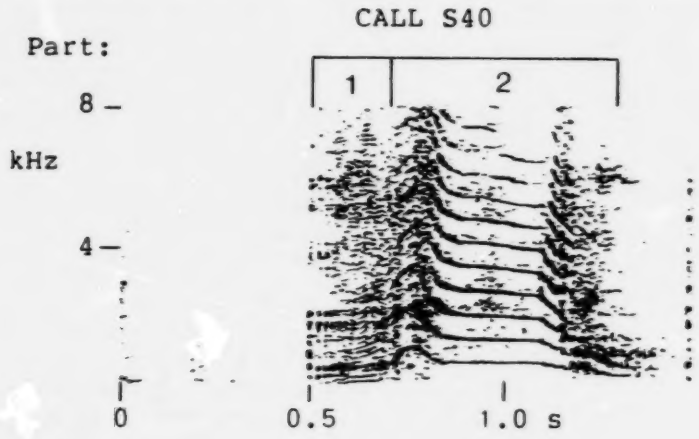


Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	609	25.5	380	977	20
Part 1:						
Dur (ms)	J	368	40.6	141	613	17
SBI (Hz)	J	45	20.3	35	85	20
Part 2:						
Dur (ms)	J	253	22.2	187	416	17
SBI, start (Hz)	J	488	16.1	367	647	20
SBI, peak (Hz)	J	864	26.0	587	1518	20
SBI, end (Hz)	J	526	19.4	386	726	20
Tone:						
f, start (Hz)	J	4605	11.2	3206	5116	17
f, 1st peak (Hz)	J	6098	4.9	5514	6648	17
f, dip (Hz)	J	5226	6.8	4800	5989	17

CALL S37ii

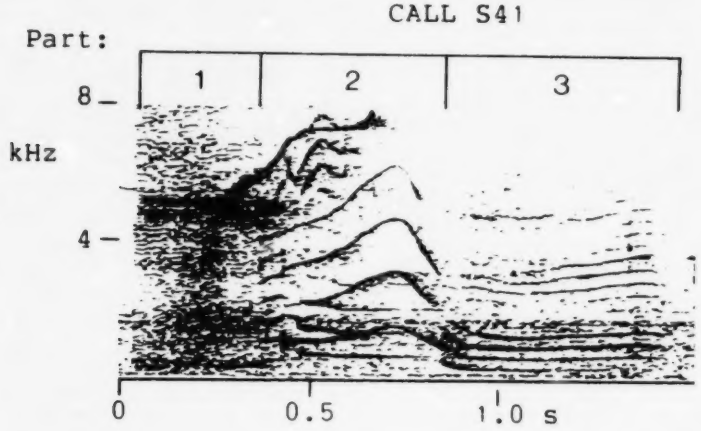


Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	L	765	16.7	654	1042	13
Part 1:						
Dur (ms)	L	444	26.6	332	635	11
SBI (Hz)	L	77	18.7	48	95	13
Part 2:						
Dur (ms)	L	389	34.1	298	685	13
SBI, start (Hz)	L	1056	14.7	905	1462	13
SBI, end (Hz)	L	795	6.4	719	909	13
Tone:						
f, start (Hz)	L	5871	5.8	5135	6254	11
f, 1st peak (Hz)	L	6657	2.7	6411	6959	11
f, dip (Hz)	L	5963	4.4	5577	6348	11



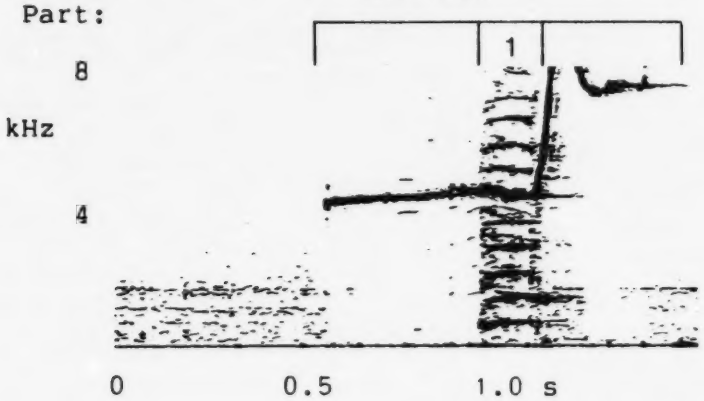
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	L	601	14.6	519	843	18
Part 1:						
Dur (ms)	L	111	34.5	19	205	18
IPI, start (ms)	L	17	30.8	5	26	18
Part 2:						
Dur (ms)	L	490	15.1	410	679	18
SBI, start (Hz)	L	580	13.0	421	661	18
SBI, peak (Hz)	L	1118	9.9	705	1223	18
SBI, mid (Hz)	L	659	11.9	511	770	18
SBI, end (Hz)	L	283	14.3	206	345	18

CALL S41



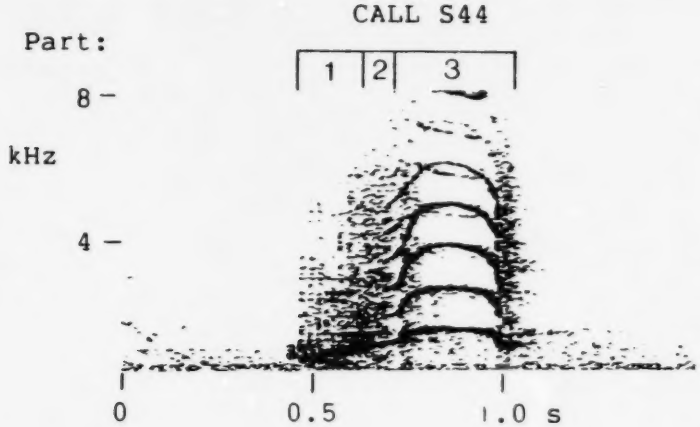
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	1318	17.0	904	1731	19
Part 1:						
Dur (ms)	J	213	47.3	42	380	19
SBI (Hz)	J	102	18.0	71	145	19
Part 2:						
Dur (ms)	J	538	23.4	365	776	19
SBI, start (Hz)	J	1037	24.5	439	1380	19
SBI, peak (Hz)	J	2118	10.4	1539	2638	19
SBI, end (Hz)	J	1164	18.8	754	1534	19
Part 3:						
Dur (ms)	J	566	23.6	302	761	19
SBI, start (Hz)	J	379	9.6	311	441	19
SBI, end (Hz)	J	361	8.4	311	403	19
Tone: f, start (Hz)	J	5208	11.8	4039	6196	19

CALL S42



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	898	18.3	618	1261	26
	L	775	12.8	705	889	3
	73	730	----	---	----	1
Part 1:						
Dur (ms)	J	251	37.9	146	566	26
	L	287	28.1	239	380	3
	73	375	----	---	---	1
SBI (Hz)	J	723	5.0	645	794	26
	L	761	6.4	726	817	3
	73	767	---	---	---	1
Tone:						
f, start (Hz)	J	4142	2.3	3983	4345	26
	L	4227	5.5	3977	4441	3
	73	4355	---	----	----	1
f, at end of Pt. 1 (Hz)	J	4490	4.4	4197	4878	26
	L	4757	2.6	4651	4890	3
	73	4820	---	----	----	1
f, end (Hz)	J	7475	2.3	7238	7903	26
	L	7352	0.3	7329	7368	3
	73	----	---	----	----	-

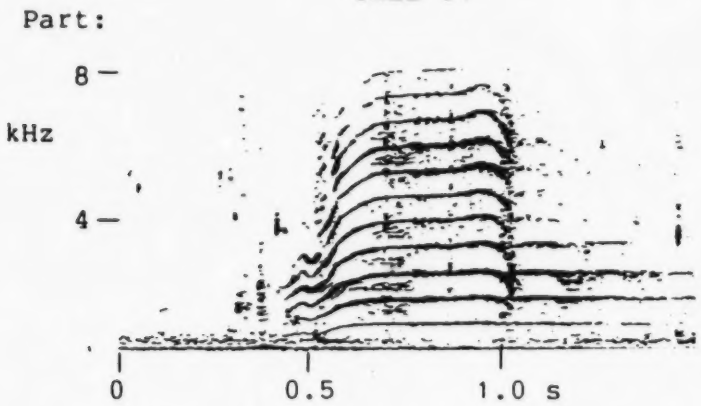
CALL S44



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	J	631	16.7	469	893	29
Part 1:						
Dur (ms)	J	183	31.6	70	326	29
IPI (ms)	J	30	22.8	21	55	29
Part 2:						
Dur (ms)	J	62	25.9	27	98	29
SBI (Hz)	J	610	16.0	399	772	29
Part 3:						
Dur (ms)	J	385	24.4	236	603	29
SBI, start (Hz)	J	648	17.3	351	800	29
SBI, mid (Hz)	J	1009	8.5	833	1219	29
SBI, end (Hz)	J	588	21.5	352	1031	29

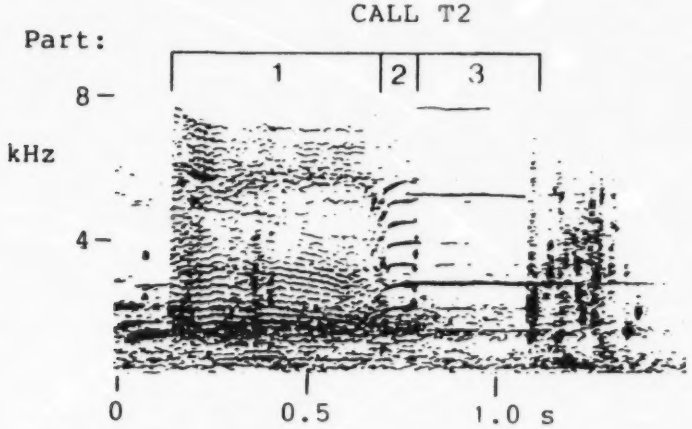
TRANSIENT COMMUNITY CALLS:

CALL T1

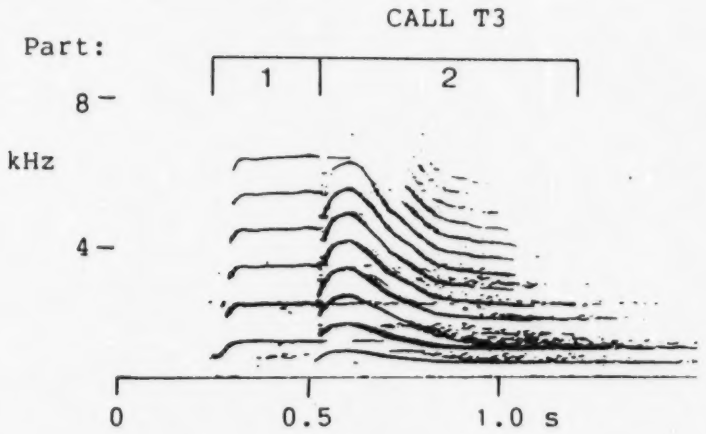


Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	O5	702	30.7	501	930	3
	X1	571	18.0	444	714	8
	Y2	803	22.3	514	957	5
Time to peak SBI (ms)	O5	691	29.6	501	908	3
	X1	541	20.4	411	708	8
	Y2	779	20.2	516	890	5
SBI, start (Hz)	O5	401	16.5	334	466	3
	X1	372	11.6	322	433	8
	Y2	397	8.2	354	439	5
SBI, peak (Hz)	O5	726	7.6	675	785	3
	X1	658	16.9	485	819	8
	Y2	622	8.6	568	675	5
SBI, end (Hz)	O5	679	21.6	513	788	3
	X1	620	19.1	445	785	8
	Y2	581	10.1	513	667	5

CALL T2

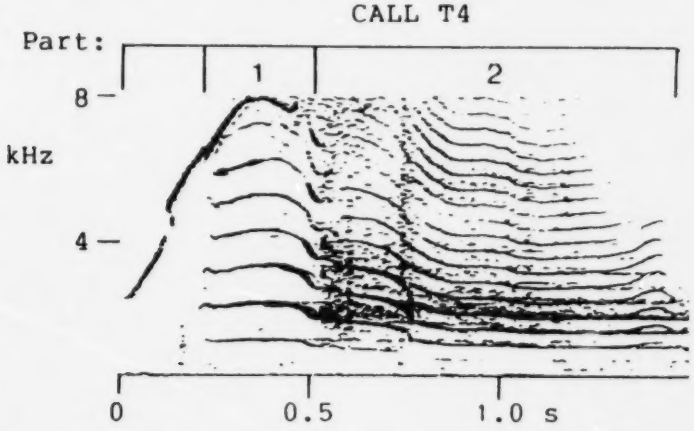


Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	X1	901	25.5	636	1040	3
Part 1:						
Dur (ms)	X1	453	40.7	243	589	3
SBI (Hz)	X1	163	6.8	151	172	3
Part 2:						
Dur (ms)	X1	115	21.2	91	140	3
SBI (Hz)	X1	560	2.1	551	573	3
Part 3:						
Dur (ms)	X1	333	14.7	278	372	3
SBI (Hz)	X1	2583	4.4	2479	2705	3



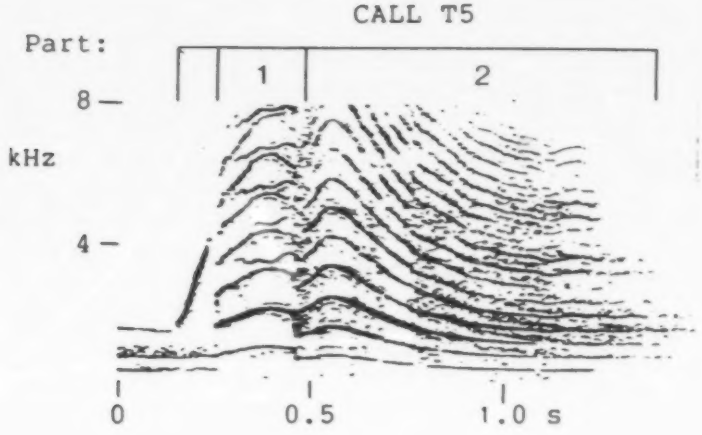
Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	X1	917	7.3	840	1012	7
Part 1:						
Dur (ms)	X1	333	19.6	284	474	7
SBI, start (Hz)	X1	663	12.7	547	815	7
SBI, mid (Hz)	X1	1033	3.2	978	1079	7
Part 2:						
Dur (ms)	X1	583	9.0	532	679	7
SBI, start (Hz)	X1	666	7.2	593	714	7
SBI, peak (Hz)	X1	788	5.8	742	856	7
SBI, end (Hz)	X1	388	10.0	345	438	7

CALL T4



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	X1	1392	10.2	1139	1574	7
Part 1:						
Dur (ms)	X1	326	20.5	264	407	7
SBI, start (Hz)	X1	1012	10.0	877	1139	7
SBI, end (Hz)	X1	762	21.2	529	1068	7
Part 2:						
Dur (ms)	X1	842	19.2	555	999	7
SBI, peak (Hz)	X1	712	7.9	655	825	7
SBI, mid (Hz)	X1	420	11.3	361	495	7
SBI, end (Hz)	X1	421	15.3	287	484	7
Tone: f, start (Hz)	X1	1759	17.3	1220	2259	7

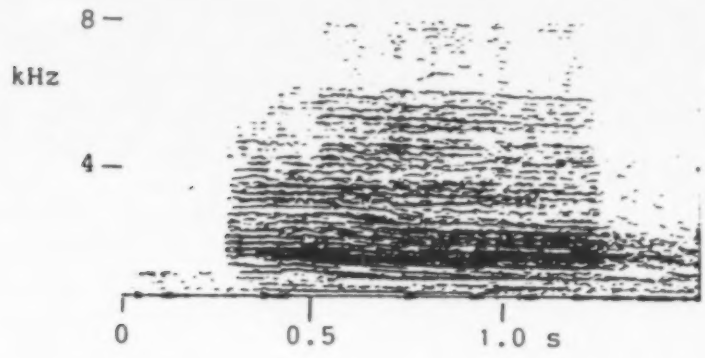
CALL T5



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	X1	1131	5.8	1030	1209	5
Part 1:						
Dur (ms)	X1	192	8.3	164	202	5
SBI, start (Hz)	X1	878	8.8	777	985	5
SBI, peak (Hz)	X1	1072	5.3	1024	1169	5
Part 2:						
Dur (ms)	X1	823	5.9	763	871	5
SBI, start (Hz)	X1	749	5.7	687	799	5
SBI, peak (Hz)	X1	819	7.2	741	886	5
SBI, end (Hz)	X1	368	5.9	346	391	5

CALL T6

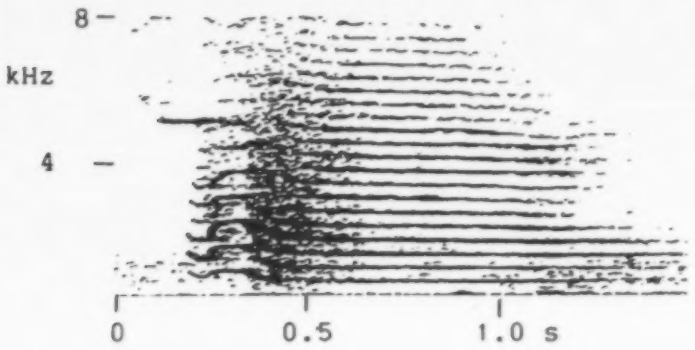
Part:



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	X1	999	16.9	868	1190	3
SBI, start (Hz)	X1	183	25.0	138	230	3
SBI, end (Hz)	X1	101	16.4	88	120	3

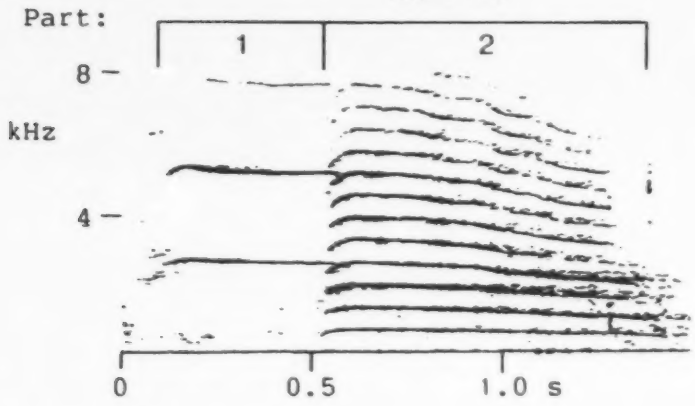
CALL T7

Part:



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	O5	946	9.1	874	1042	3
	Y2	1087	4.1	1050	1149	4
SBI, start (Hz)	O5	454	16.1	378	524	3
	Y2	487	8.4	430	517	4
SBI, peak (Hz)	O5	707	4.5	685	744	3
	Y2	668	4.1	632	695	4
SBI, mid (Hz)	O5	467	2.1	456	475	3
	Y2	409	7.2	369	439	4
SBI, end (Hz)	O5	390	3.4	383	406	3
	Y2	353	6.2	330	373	4
Tone:						
Dur (ms)	O5	230	13.3	199	260	3
	Y2	228	8.6	206	249	4
f, start (Hz)	O5	5178	0.6	5153	5213	3
	Y2	5011	2.3	4899	5173	4

CALL T8



Measurement	Pod	Mean	C.V.	Min	Max	n
Duration (ms)	O5	726	----	---	---	1
	Y2	1271	----	---	---	1
Part 1:						
Dur (ms)	O5	264	----	---	---	1
	Y2	442	----	---	---	1
SBI, start (Hz)	O5	2551	----	---	---	1
	Y2	2534	----	---	---	1
SBI, end (Hz)	O5	2656	----	---	---	1
	Y2	2539	----	---	---	1
Part 2:						
Dur (ms)	O5	462	----	---	---	1
	Y2	829	----	---	---	1
SBI, start (Hz)	O5	634	----	---	---	1
	Y2	532	----	---	---	1
SBI, peak (Hz)	O5	685	----	---	---	1
	Y2	640	----	---	---	1
SBI, end (Hz)	O5	306	----	---	---	1
	Y2	463	----	---	---	1

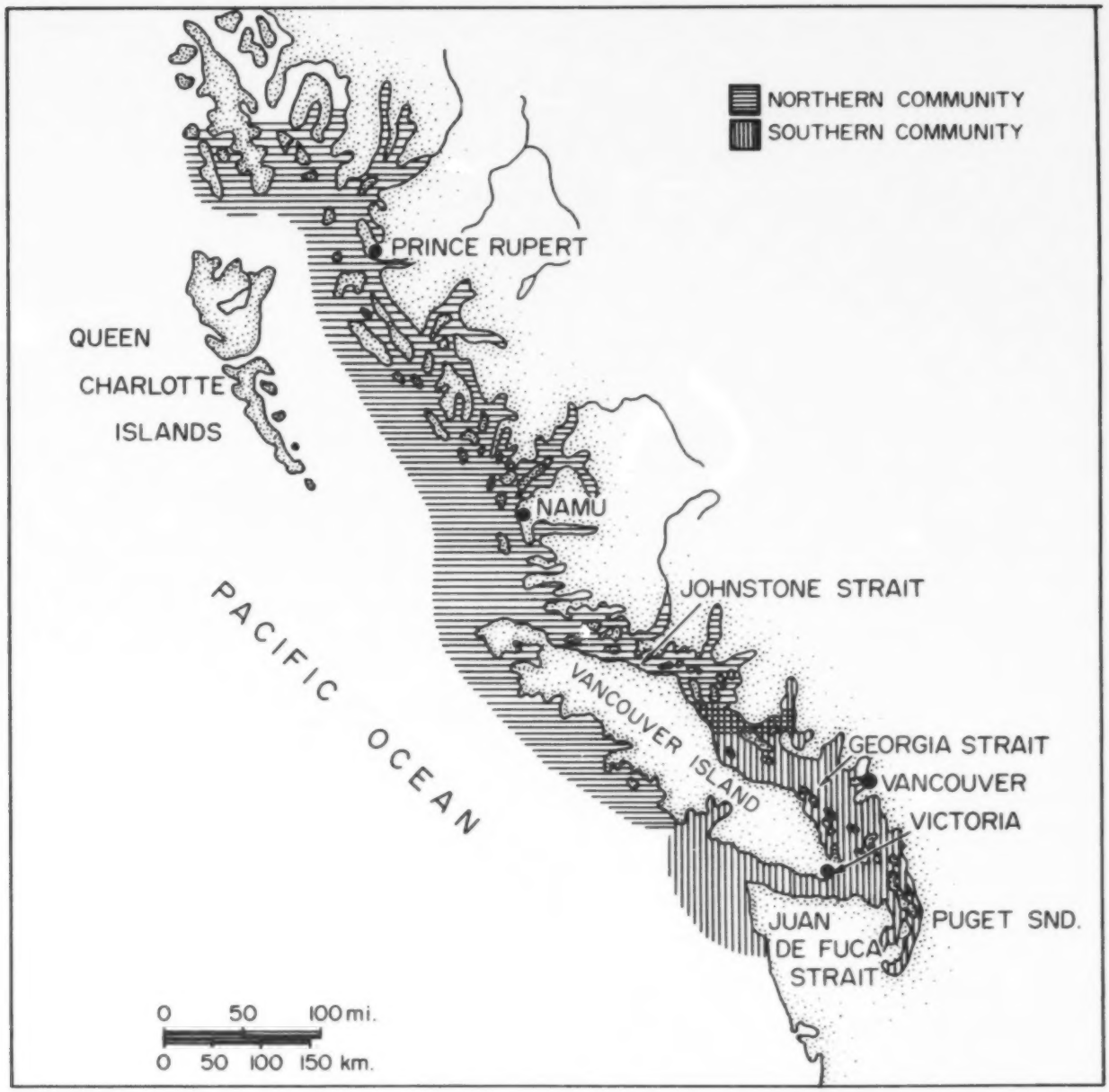


Fig. 1. Distribution of resident killer whales in British Columbia. Data from Bigg (1982, pers. comm. 1986).